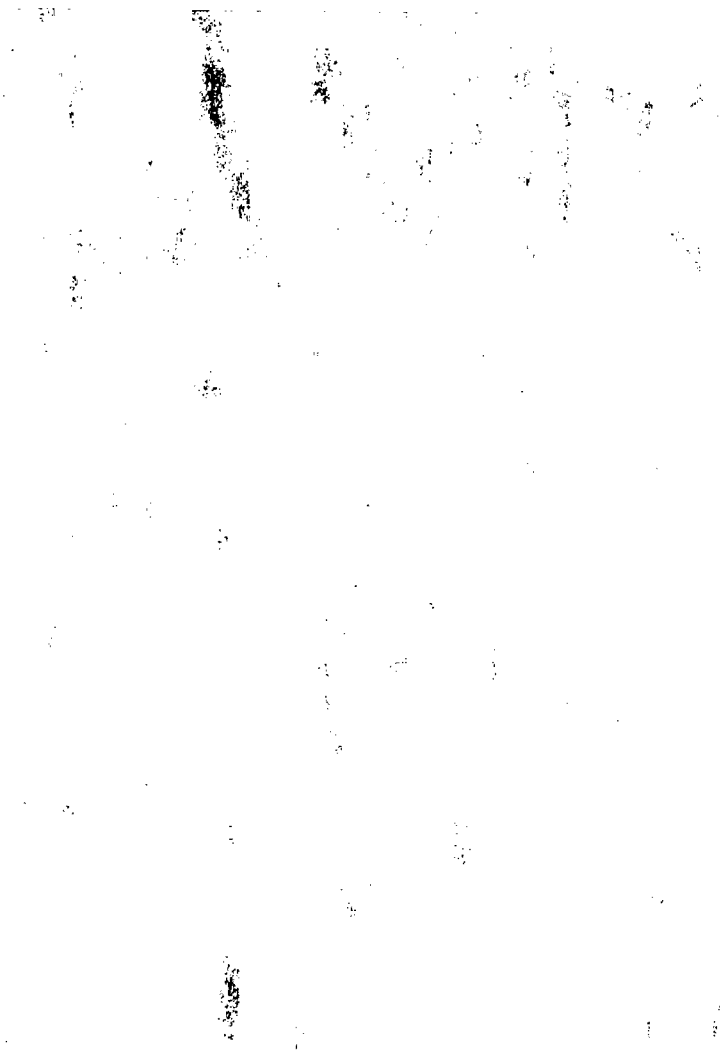
Monthly Oversight Report 52
ACS NPL Site
Griffith, Indiana
April 2, 2005 - May 6, 2005



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Black & Veatch Special Projects Corp.

USEPA/RAC VII
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526
BVSPC File C.3
May 13, 2005

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 52 for April 2005

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 52 for April 2005 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 52
ACS Superfund Site WA57, 46526.238

Reporting Period: Month of April (April 2 - May 6, 2005)
BVSPC O/S Dates: April 5, 7, 11, 14, 21, and 28, and May 6, 2005 (Ms. Clark and Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
US Environmental Protection Agency	1	Federal Regulatory Agency
Indiana Department of Environmental Management	1	State Regulatory Agency
Environ	1	Respondent's Oversight Consultant
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
PSA Environmental	2	Chemical Oxidation Geoprobe Contractor
ISOTEC	3	Chemical Oxidation Contractor
Walsh & Kelly	2	Traffic Control Contractor
Austgen	1	General Contractor
Microbac	1	GWTP Sampling Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- ISOTEC and PSA Environmental completed the second full-scale round of chemical oxidation injections of modified Fenton's reagent in the South Area plume.
- Montgomery Watson Harza responded to a small discharge of product-contaminated groundwater onto the Still Bottoms Pond Area cover from SVE-46.
- Global Technologies conducted a thorough inspection of thermal oxidizer 2.
- Microbac (formerly Simalabs) collected samples from the groundwater treatment plant for routine process monitoring.

- Montgomery Watson Harza held chemical oxidation status meetings at the site on April 7, 14, 21, 2005, and the March and April monthly operation status meetings on April 7 and May 6, 2005, respectively.

Activities Performed:

Montgomery Watson Harza (MWH) reported (April 7) that the groundwater treatment plant (GWTP) was operational 100% of the time in March, processing groundwater at average rates of 25 to 27 gpm. MWH reported that in April it began to operate the GWTP using a different flow control procedure and that the GWTP initially operated at 30 to 36 gpm. MWH later reported (May 6) that the GWTP was operational 100% of the time in April, processing groundwater at average rates of 25 to 40 gpm. MWH reported that water was being pumped to the GWTP from all trench and well sources during March and April.

MWH reported that the repaired biotank clarifier rake was rotating satisfactorily. MWH concluded that the stoppage of the rake had resulted from worn gears in the gear box, and not because of a physical blockage of the rake. MWH reported that the GWTP was shut down for two days during the March reporting period to repair the worn gear box and motor on top of the biotank clarifier. The GWTP was shut down for two days during early May because of the inspection of thermal oxidizer 2 (thermox 2). Microbac (formerly Simalabs) collected samples from the GWTP for routine process monitoring.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems.

MWH reported that during March and April, thermox 1 processed 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 23 (of 46) ISVE wells. MWH also reported that thermox 2 processed 1,000 cfm of vapors from the OFCA ISVE system, collecting vapors from 28 (of 42) ISVE wells and aeration tank T102. Both systems were operational 24 out of 31 days in March (77% of the time). The SBPA and OFCA ISVE systems were operational, respectively, 29 and 28 days out of 30 days in April (97% and 93% of the time).

MWH reported that both ISVE systems had been down for a few days each for regular maintenance during the April reporting period. MWH reported that the OFCA ISVE system had shut down because of high exit temperatures in thermox 2 that resulted when both OFCA blowers were operating. In order to maintain operations of the OFCA ISVE system, MWH reported that it currently operated only one of the two blowers at a time, cycling the operation of the two OFCA blowers. MWH reported that both ISVE systems had been shut down for parts of two days during May while Global Technologies inspected thermox 2.

A Global Technologies technician was onsite on May 3 and 4 to conduct a thorough inspection of the Global-manufactured thermox 2 heat exchanger and scrubber. Global found that 5 of the 300 tubes in the heat exchanger had deteriorated. MWH is awaiting recommendations from Global regarding repair of the unit. MWH is considering blocking the five deteriorated tubes. Global reoriented the spray nozzles in the thermox 2 scrubber, which may allow operation of both OFCA ISVE blowers.

While thermox 2 was being inspected by Global, MWH performed maintenance on thermox 1 and inspected the recoated interior of the thermox 1 scrubber.

MWH reported that it pumped 18 and 14 gallons of product, respectively, from five and three ISVE wells in the SBPA during March and April. The product was transferred to the oil holding tank T6 in the GWTP.

MWH reported during the January reporting period that odors had been reported in the ACS break room located on the ONCA SBPA cap. MWH has since operated the SBPA air sparge system using only four of the six ONCA SBPA air sparge points AS3, AS4, AS5, and AS6, located at distance from the break room. ACS has not reported additional recurrence of odors in the break room.

MWH reported on April 25 that SBPA ISVE dual phase extraction (DPE) well SVE-46 had discharged 50 to 100 gallons of groundwater containing product onto the SBPA cover. This discharge flowed into the catch basin at the north edge of the cover and then flowed on into the first (or three) ACS stormwater vaults northwest of the SBPA cover. MWH reported an oil sheen on the water surface in vault 1, but not on the surfaces of the liquid in the second and third stormwater vaults. MWH reported that it removed the DPE pump from well SVE-46 and stored it in the hazardous waste roll-off area at the GWTP for later inspection. MWH plugged the DPE discharge line and reactivated the DPE system. MWH reported that it believed the SVE-46 check valve had failed.

MWH reported that it coordinated with ACS and pumped liquid from the catch basin and stormwater vaults 1 and 2 directly into the MWH GWTP biotank. MWH used high pressure hose and a limited amount (~1 quart) of muriatic acid to wash down the SBPA cover and the sides of the catch basin and vaults. Approximately 3,000 gallons of water were used and then pumped into the biotank.

ISOTEC and PSA Environmental completed the second full-scale round of In-Situ Chemical Oxidation (ISCO) injections in the South Area plume during the reporting period. Walsh & Kelly (W&K) provided traffic control for the ISCO injections in Colfax Avenue during the April 11-16 period. MWH reported that it held a third-shift safety meeting on April 11 with ISOTEC, PSA, and W&K to focus on the new safety issues associated with traffic control and operating in the roadway of Colfax Avenue. Black & Veatch Special Projects Corp (BVSPC) also attended this safety briefing. MWH reported that tailgate safety meetings were also held prior to the beginning of work each day. MWH reported that it was monitoring air quality at the ISCO probe holes and in the worker's breathing zone, but had not detected any VOCs.

Observed W&K set up road signs and traffic cones to facilitate ISCO injections initially in the west lane of Colfax Avenue. MWH reported that 249 of a total of 456 ISCO points had been injected during April and all ISCO injection work had been completed on April 17. PSA and ISOTEC demobilized from the site on April 17 and April 18, respectively. With MWH permission, ISOTEC left six mixing tanks and some dry chemicals at the site for use during the planned third full-scale round of ISCO injections later this summer. The tanks are stored near the OFCA blower shed, and the dry chemicals are stored in sealed plastic bags within a 55-gallon drum in the secured area east of the GWTP. MWH reported that ISOTEC provided material safety data sheets (MSDSs) for the dry chemicals.

Because of the theft of ISOTEC equipment on March 26/27, ISOTEC parked its truck and towed air compressor overnight adjacent to the GWTP. MWH continued to store the water regulator in the GWTP overnight to eliminate freezing problems. MWH reported that Jim Reyome, Griffith Director of Public Works, had visited the ISCO site and observed lane closures on Colfax Avenue and inspected patching of ISCO drill holes in the pavement. These holes were patched with black-colored cement grout. Mr. Reyome was satisfied with traffic flow and the pavement patching.

MWH reported that an ACS contractor was trenching near the SBPA ISVE electrical and water discharge piping. MWH reported that it deactivated the electrical and water lines during this construction activity.

MWH reported that Fliteway delivered and installed a noise reduction enclosure to surround blower ME-102 at the GWTP. Noise levels near the blower dropped significantly. MWH had taken instrument readings of the noise levels at various distances from the blower before and after the installation of the noise reduction enclosure. MWH presented a graph and table summarizing the before and after noise levels at various distances from blower ME-102.

B+V suggestion

MWH reported that its corporate health and safety officer was onsite April 28 and 29 to conduct an internal audit of the ACS health and safety program. The program received a 100% passing score.

EPA suggested that the cover of the OFCA should be inspected for erosion. MWH reported that no erosion problems had been observed in the OFCA during its periodic trips to measure water levels in the piezometers in the OFCA.

MWH conducted ISCO status meetings on April 7, 14, and 21 at the site. MWH conducted the March and April operation & maintenance (O&M) status meetings, respectively, at the site on April 7 and at MWH's Chicago office on May 6. BVSPC attended these meetings.

Attached are BVSPC weekly reports No. 214 through 218, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on April 5, 7, 11, 14, 21, and 28.

Topics of Concern: None

Concern Resolution: None

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to monitor odors in the ACS break room.
- MWH to conduct 24-hour indoor air sampling in the house at 1002 Reder Road in late May.
- MWH to change out granular activated carbon at GWTP in early May.
- Global Technologies to provide its report regarding the inspection of thermox 2.

- MWH to submit it's Phase 1 lower aquifer investigation report and proposed plan for Phase 2 investigation by May 13 and conduct the investigation in mid-June.
- Next O&M meeting will occur at MWH's Chicago office at 10 AM on June 3.
- Post second round ISCO injection sampling will occur May 31 - June 3.
- Third round of ISCO injections tentatively scheduled for late June / early July.

Signature: Larry Campbell Date: May 13, 2005

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Weekly Oversight Summary Report No. 214
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 4, 2005
BVSPC O/S Dates: April 5 and 7, 2005 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
US Environmental Protection Agency	1	Federal Regulatory Agency
Environ	1	Respondent's Oversight Consultant
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
PSA Environmental	2	Chemical Oxidation Driller
ISOTEC	3	Chemical Oxidation Contractor
Austgen	1	General Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza continued the second round of in-situ chemical oxidation injections on and around the property at 1002 Reder Road (completed second 10-day shift).
- Montgomery Watson Harza conducted the combined monthly operation and maintenance meeting and the chemical oxidation status meeting at the project site on April 7.

Activities Performed:

Montgomery Watson Harza (MWH) reported that the groundwater treatment plant (GWTP) was operational 100% of the time in March, processing groundwater at average rates of 25 to 27 gpm. MWH reported that in April it began to operate the GWTP using a different flow control procedure and that the GWTP operated at 30 to 36 gpm. MWH reported that water was being pumped to the GWTP from all trench and well sources. MWH reported that the biotank clarifier rake was rotating satisfactorily. MWH concluded that the stoppage of the rake resulted from worn gears in the gear box, and not a physical blockage of the rake. The GWTP was shut down for two days during the reporting period to repair the worn gear box and motor on top of the biotank clarifier.

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems.

MWH reported that during March, thermox 1 processed 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 23 (of 46) ISVE wells. MWH also reported that thermox 2 processed 1,000 cfm of vapors from the OFCA ISVE system, collecting vapors from 28 (of 42) ISVE wells and aeration tank T102. Both systems were operational 24 out of 31 days (77% of the time).

MWH reported that both ISVE systems had been down for a few days each for regular maintenance during this weekly reporting period. MWH reported that the OFCA ISVE system had shut down because of high exit temperatures in thermal oxidizer 2 (thermox 2) that resulted when both OFCA blowers were operating. In order to maintain operations of the OFCA ISVE system, MWH reported that it is currently operating only one of the two blowers at a time. MWH reported that it is cycling the operation of the two OFCA blowers.

MWH reported that it pumped 18 gallons of product from five ISVE wells in the SBPA during March. The product was transferred to the oil holding tank T6 in the GWTP.

MWH reported that ACS has not reported any recurrence of detection of odors in the employee break room located on the SBPA cover.

MWH reported that it had ordered a noise-abatement structure to be placed around the large air blower ME-102 at the south end of the GWTP building and that it could be installed in the next 3 to 4 weeks.

ISOTEC and PSA Environmental continued the In-Situ Chemical Oxidation (ISCO) injections in the South Area plume near the house at 1002 Reder Road. MWH reported that it held tailgate safety meetings with ISOTEC and PSA prior to the beginning of work each day. MWH reported that it was monitoring air quality at the ISCO probe holes and in the worker's breathing zone, but had not detected any VOCs.

MWH reported that a total of 322 (of the planned 445) ISCO points had been injected as of the end of the second work shift on April 6 when ISOTEC and PSA crews left the site for their 4-day break. Remaining points will be on the shoulders and in the roadway of Colfax Avenue.

Because of the theft of ISOTEC equipment on March 26/27, ISOTEC parks its truck and towed air compressor overnight adjacent to the GWTP. MWH continues to store the water regulator in the GWTP overnight to eliminate freezing problems.

MWH reported that it has and will continue to maintain contact with the City of Griffith and with the family at 1002 Reder Road regarding the status of the ISCO injection program.

MWH reported that an ACS contractor was trenching near the SBPA ISVE electrical and water discharge piping. MWH reported that it deactivated the electrical and water lines during this construction activity.

EPA suggested that the cover of the OFCA should be inspected for erosion. MWH reported that no erosion problems had been observed in the OFCA during its periodic trips to measure water levels in the piezometers in the OFCA.

MWH conducted a combined monthly operation and maintenance meeting (summarizing March performance statistics) and an ISCO status meeting at the site on Thursday, April 7. Black & Veatch Special Projects (BVSPC) personnel attended this meeting.

Topics of Concern: None.

Concern Resolution: None.

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to complete the third shift of the second full-scale round of ISCO injections, including injections beneath Colfax Avenue.
- MWH to monitor odors in the ACS break room.
- MWH to assess results of additional soil gas samples to assess possible soil vapor intrusion into the house basement resulting from the smear zone in the South Area plume.
- MWH to change out granular activated carbon at GWTP in late April.
- Global Technologies to inspect thermox 2 in late April.
- MWH to complete its revised approach to completing the lower aquifer investigation and conduct the investigation in June.
- Next construction progress meeting will occur onsite at 10 AM on April 14.
- Post second round ISCO injection sampling will occur in May.
- Third round of ISCO injections tentatively scheduled for late June / early July.
- MWH to install noise containment structure to reduce noise from GWTP blower.

Signature: Larry Campbell Date: April 12, 2005

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ACS STATUS MEETING MINUTES
FOR APRIL 7, 2005 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 7, 2005

MEETING TIME: 10:00

MEETING LOCATION: MWH Trailer at ACS

ATTENDEES:
Kevin Adler - U.S. EPA
Larry Campbell – Black & Veatch (via telephone)
Aaron Potts – Environ (via telephone)
Rob Adams – MWH (via telephone)
Chris Daly – MWH (via telephone)
Lee Orosz – MWH
Matthew Mesarch – MWH (via telephone)
Chad Smith – MWH (via telephone)

TOPICS:

General Note: The April 7th meeting covered all site activities since the last Operations & Maintenance meeting on March 4th and the chemical oxidation work since March 31st.

SITE STATUS

Health and Safety Summary

There have been no health and safety issues since the last meeting on March 31st. The Griffith Fire Department was on site on March 22nd to tour the facility. Lee Orosz provided an orientation to the plant noting locations of the facility' material data safety sheets and confined spaces. Twenty-nine fire department personnel attended the orientation which MWH hopes will occur annually.

There were no health and safety issues associated with the chemical oxidation event. MWH continues to monitor worker breathing zones with a photo-ionization detector (PID) and have not seen any elevated readings. Work will proceed near and in Colfax Road. Proper precautions (spotters, traffic cones, etc.) will be taken in accordance with the safety plan.

Groundwater Treatment Plant (GWTP) Status

The GWTP averaged 30 to 36 gallons per minute (gpm) in March. Pumping occurred from all available sources. The effluent analytical data for March (yet to be validated) showed that the GWTP operated in compliance with the discharge standards for the plant.

The GWTP was shut down for two days during the week of April 4th so that the gearboxes and motor on top of the activated sludge plant could be replaced.

Off-Site Area/SBPA ISVE Systems

The ISVE systems were both operational approximately 77 percent of the time during March. The systems were shutdown intermittently due to work being performed on the thermal oxidizers. The SBPA system was also shut down to service the knockout tank.

The mass removal rate for both systems have decreased in the past two months. During March, MWH balanced the flows in the SBPA system to optimize capture of vapors throughout the active well set.

Thermal Oxidizer 2 was shut down multiple times due to a high scrubber temperature. MWH performed several maintenance actions to rectify the condition including changing the spray bar nozzles and the temperature probe. However, the condition continues when the unit is treating vapors from the two Off-Site Area ISVE blowers. To maintain operation, only one of the Off-Site Area ISVE blowers is currently operating. MWH had previously contracted Global Technologies to perform an inspection of Thermal Oxidizer 2 (TOX2). An investigation of this problem will be added to their inspection. They will perform a 75-point inspection of the unit. The event is scheduled for the week of April 25th and the system is expected to be out of operation for two days during the inspection.

Thermal Oxidizer 1 was shut down to perform maintenance on the main gas valve and to address a flame failure issue. Both issues have been addressed and the unit is running nominally.

The Off-Site and SBPA air sparge systems were operational during March.

Interaction with Community

MWH has received a proposal from Fliteway Technologies for fabricating a noise abatement enclosure for one of the large blowers at the GWTP. Housing for only one blower will be ordered at this time. MWH will evaluate the effectiveness of the housing before ordering housings for the other blowers.

An ACS subcontractor is performing trenching within the ACS facility. The trench line will cross GWTP's water pipes and the ISVE pipes. MWH will shut down the water lines during the activity.

Lower Aquifer Investigation

The Lower Aquifer Investigation Report is scheduled to be submitted before the end of April. Field work will begin in June after approval by the Agencies and when water levels are expected to be lower in the wetland area.

Groundwater Sampling Event

The semi-annual groundwater sampling event was completed on Tuesday, March 29, 2005. MWH expects to receive analytical results within two weeks and will issue a report shortly thereafter.

Chemical Oxidation Treatment

The second 10-day Chemical Oxidation shift ended on April 6, 2005. As of that date, 322 of the 445 injection points had been completed. The third 10-day shift will begin Monday, April 11th at 7:30 a.m. with a health and safety kickoff meeting. Work in the roadway will begin following the meeting at 9:00 a.m. and will last for one week. Walsh & Kelly will be performing traffic control while work is being done in the road. A Walsh & Kelly employee certified by the state in traffic safety control will be onsite to approve setup of the traffic control cones and signs prior to the commencement of work.

LOOK AHEAD

Field Events

- ISVE Monitoring – April 13 (tentative)
- Second full-scale chem-ox application – the third 10-day shift begins Monday, April 11th at 7:30 a.m.
- Carbon changeout at GWTP – end of April 2005

Reports

- Monthly Status Report – April 8
- HASP Update – to be submitted in May 2005
- SBPA ISVE System Upgrades Design – April 11
- Lower Aquifer Investigation – end of April

Health & Safety Look Ahead

- A health and safety kickoff meeting will be held on Monday, April 11, 2005 at 7:30 a.m. to discuss the chem-ox injections to take place in the roadway. Work in the roadway will begin at 9:00 a.m.
- As part of their inspection, Global Technologies will be performing a confined space entry to view the heat exchanger for Thermal Oxidizer 2.
- During the springtime, bees and wasps are a concern around the site.

Future Meetings

- Chemical Oxidation Progress Meeting – Thursday, April 14, 2005, 10 a.m. at the Site.

MBM/CAD/RAA/PJV
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SITE MEETING AGENDA
APRIL 7, 2005
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 7, 2005

MEETING TIME: 10:00

MEETING LOCATION: MWH Trailer at ACS

TOPICS:

SITE STATUS
- Health and Safety Summary
- GWTP Status
- ISVE Systems Status (incl. Thermal Oxidizers)
- Interaction with ACS Facility or Community

CURRENT ISSUES
- Lower Aquifer Groundwater Investigation
- Chem-Ox Application in South Area (ongoing)

MISCELLANEOUS
- Open

LOOK AHEAD

Field Events
- Groundwater sampling event - March 21
- Second full-scale chem-ox application – third 10-day shift begins Monday, April 11th
- ISVE Monitoring – April 13 (tentative)

Reports
- Monthly Status Report – March 9
- Quarterly Report, 2nd Quarter 2004 – Agency approval received; final version issued March 11
- SBPA Cover CCR – Comments received; RTCs submitted on March 25
- ISVE Systems O&M Manual – Comments received; final version issued on March 25
- Quarterly Report, 4th Quarter 2004 – to be submitted in April
- HASP Update – to be submitted in May 2005
- SBPA ISVE System Upgrades Design – April 11

Health & Safety Look Ahead
- Colfax Avenue lane closure beginning Monday, April 11th

CAD/MBM/CAD
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Remedial Progress Report	March-05		Report Date: 4/4/2005

GWTP & Dewatering

The GWTP was operational for 31 days out of 31 days (100%).
Total Gallons treated = 871,319 gallons since 2/25/05 (28 days).

Ave. Flow Rate (gpm)	
1/21/05	30
2/25/05	27
3/4/05	27
3/11/05	27
3/18/05	27
3/25/05	25

Tables, Graphs & Figures
Table - Compliance Data
Graphs - Off-Site Dewatering
Graphs - SBPA Dewatering

SBPA ISVE System

System was operational 24 out of 31 days (77%).
System monitoring was conducted on 3/9/05.
The next monitoring event is scheduled for 4/13/05.

Tables, Graphs & Figures
Graph - Mass Extraction
Graph - Total VOC removal

Product Removal	
SVE-52	2 gal
SVE-53	7 gal
SVE-62	2 gal
SVE-72	2 gal
SVE-88	5 gal

Active Wells (23 of 46 total)	
SVE-43	SVE-67
SVE-45	SVE-68
SVE-47	SVE-70
SVE-48	SVE-71
SVE-55	SVE-74
SVE-56	SVE-75
SVE-57	SVE-76
SVE-58	SVE-83
SVE-59	SVE-85
SVE-60	SVE-86
SVE-63	SVE-87
SVE-64	

Off-Site ISVE System

System was operational 24 out of 31 days (77%).
System monitoring was conducted on 3/9/05.
The next monitoring event is scheduled for 4/13/05.

Tables, Graphs & Figures
Graph - Mass Extraction
Graph - Total VOC removal

Active Wells (28 of 42 total)	
SVE-01	SVE-21
SVE-03	SVE-23
SVE-04	SVE-25
SVE-05	SVE-26
SVE-07	SVE-27
SVE-08	SVE-29
SVE-09	SVE-30
SVE-11	SVE-31
SVE-13	SVE-33
SVE-14	SVE-36
SVE-15	SVE-37
SVE-16	SVE-38
SVE-19	SVE-39
SVE-20	SVE-41

Comments

Data presented here is for informational purposes only. Not all data presented in this report has been validated.

Table
Summary of Effluent Analytical Results
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 92 1/19/2005	Month 93 2/15/2005	Month 94 3/15/2005	Effluent Limits	Lab Reporting Limits
pH	7.43	7.06	RESULTS NOT RECEIVED AS OF 3/31/05	6-9	none
TSS	1.87	NS		30	10
BOD	< 2	NS		30	2
Arsenic	7.0 B	NS		50	3.4
Beryllium	ND	NS		NE	0.2
Cadmium	ND	NS		4.1	0.3
Manganese	1.9 B	NS		NE	10
Mercury	ND	NS		0.02 (w/DL = 0.64)	0.64
Selenium	ND	NS		8.2	4.3
Thallium	ND	NS		NE	5.7
Zinc	ND	NS		411	1.2
Benzene	0.14 J	0.14 J		5	0.5
Acetone	1.0 JB	2.4 J		6,800	3
2-Butanone	ND	ND		210	3
Chloromethane	ND	ND		NE	0.5
1,4-Dichlorobenzene	ND	ND		NE	0.5
1,1-Dichloroethane	ND	ND		NE	0.5
cis-1,2-Dichloroethene	0.71	0.57		70	0.5
Ethylbenzene	ND	0.14 J		34	0.5
Methylene chloride	1.8	1.0		5	0.6
Tetrachloroethene	0.17 J	0.16 J		5	0.5
Trichloroethene	ND	0.12 JB		5	0.5
Vinyl chloride	ND	0.22 J		2	0.5
4-Methyl-2-pentanone	ND	ND		15	3
bis (2-Chloroethyl) ether	ND	NS		9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	NS		6	6
4 - Methylphenol	ND	NS		34	10
Isophorone	ND	NS		50	10
Pentachlorophenol	ND	NS		1	1
PCB/Aroclor-1016	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	NS		0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Bolded result indicates a exceedence of the discharge limit
pH data is expressed in S.U.
Metals, VOC, SVOC and PCB data is expressed in ug/L
ND = Not detected
NS = This analyte was not sampled or analyzed for
NE = No effluent limit established.
DL = Detection limit
* = Approved SW-846 method is incapable of achieving effluent limit.

DRAFT VERSION
For Informational Purposes Only

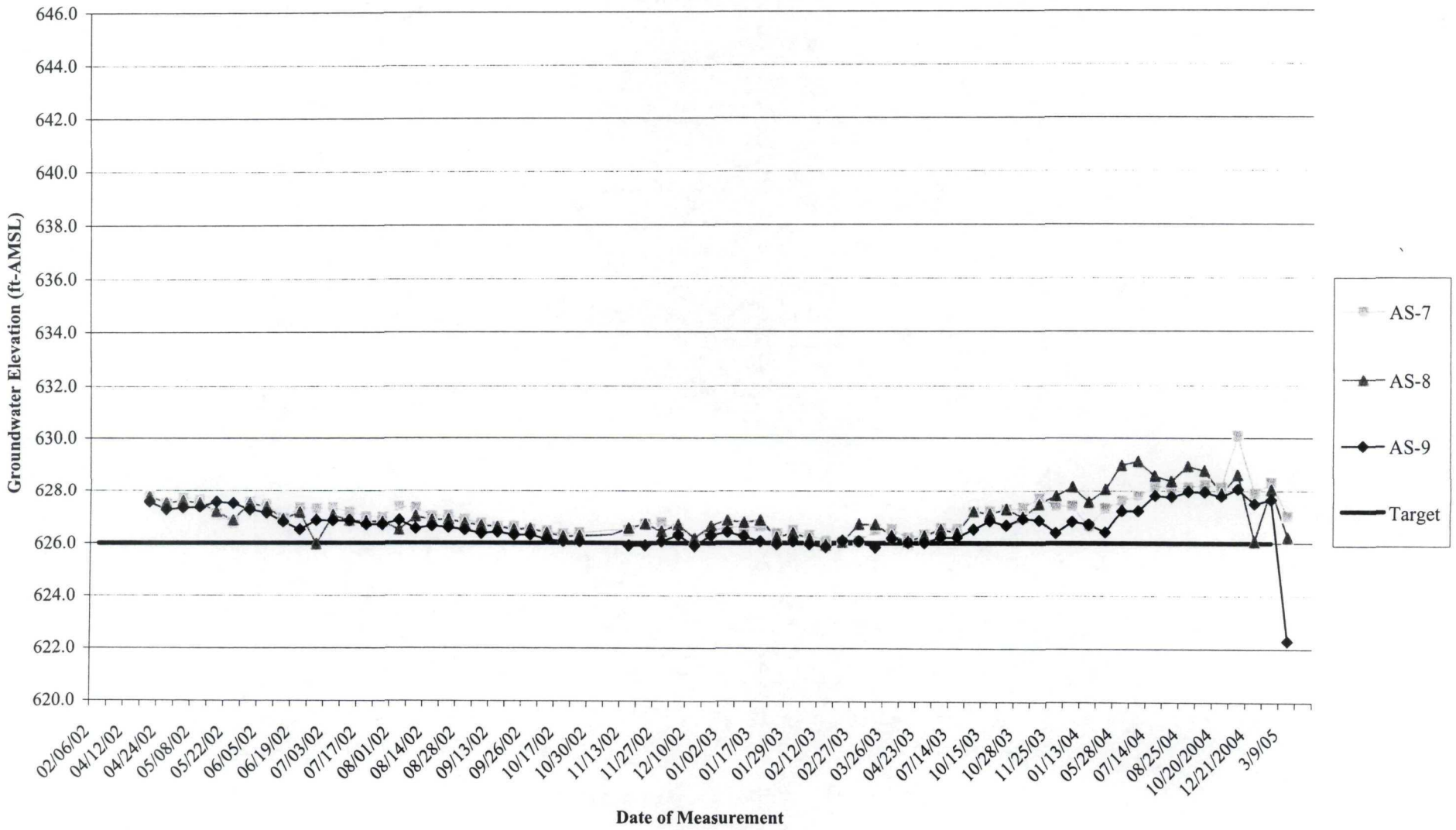
Not all data presented here has been validated
Notes and suffix definitions have not been updated.

Suffix Definitions:

_/ = Data qualifier added by laboratory
/_ = Data qualifier added by data validator
J = Result is estimated
B = Compound is also detected in the blank
UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value
JB = Result is detected below the reporting limit and is an estimated concentration. The compound is also detected in the method blank resulting in a potential high bias
UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination
UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

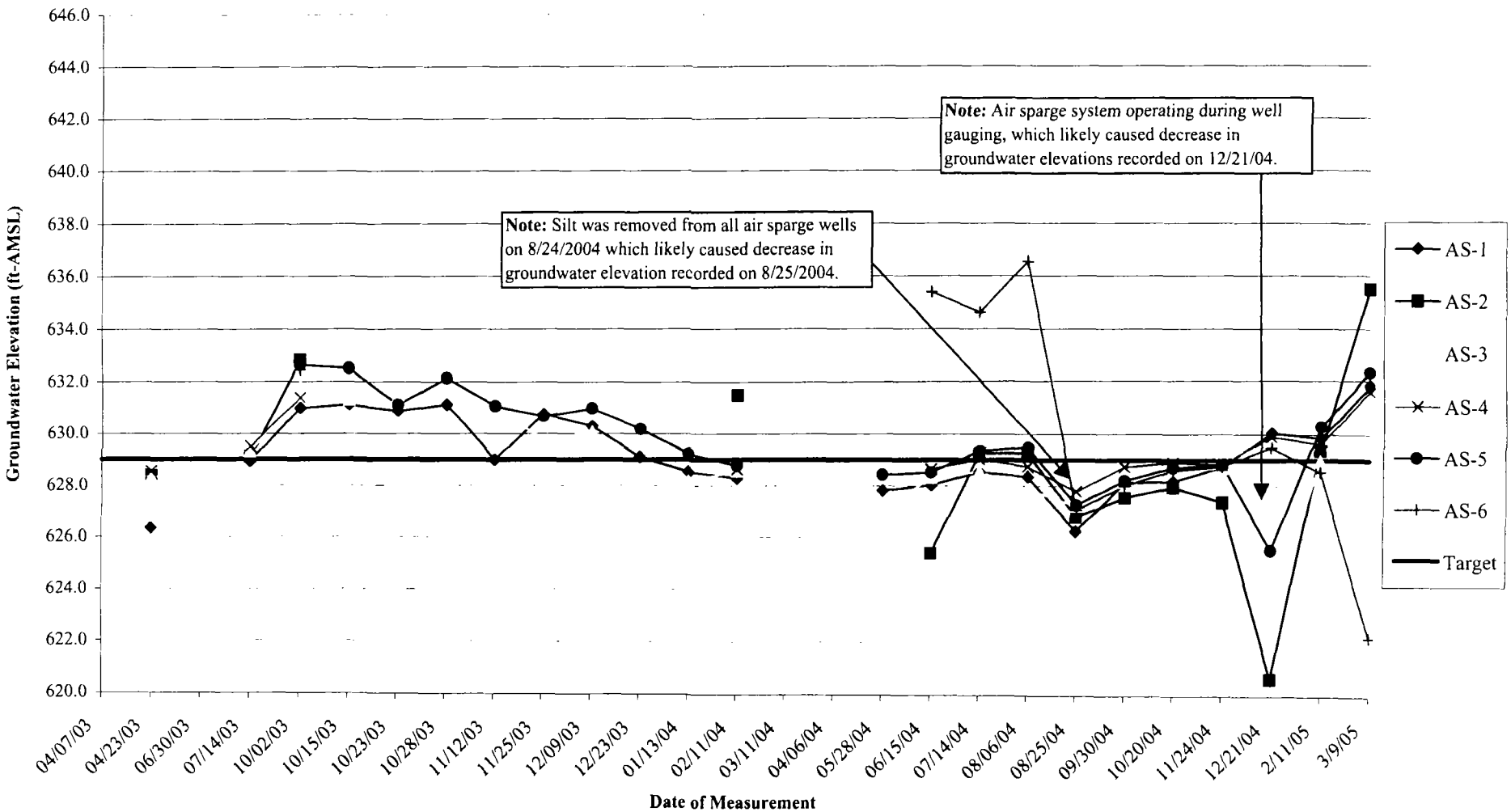
CAD/
J:\209\0603 ACS\Remedial System Metrics\GWTP\Effluent Analytical Results xls\Effl

Figure 2
Off-Site Area
Groundwater Level Status
ACS NPL Site
Griffith, Indiana



ALC/jmf
J:/209/0601/0113/Data Forms/Off-Site GW Level Monitoring.2005.xls/Drawing 4

Figure 1
SBPA
Groundwater Level Status
ACS NPL Site
Griffith, Indiana



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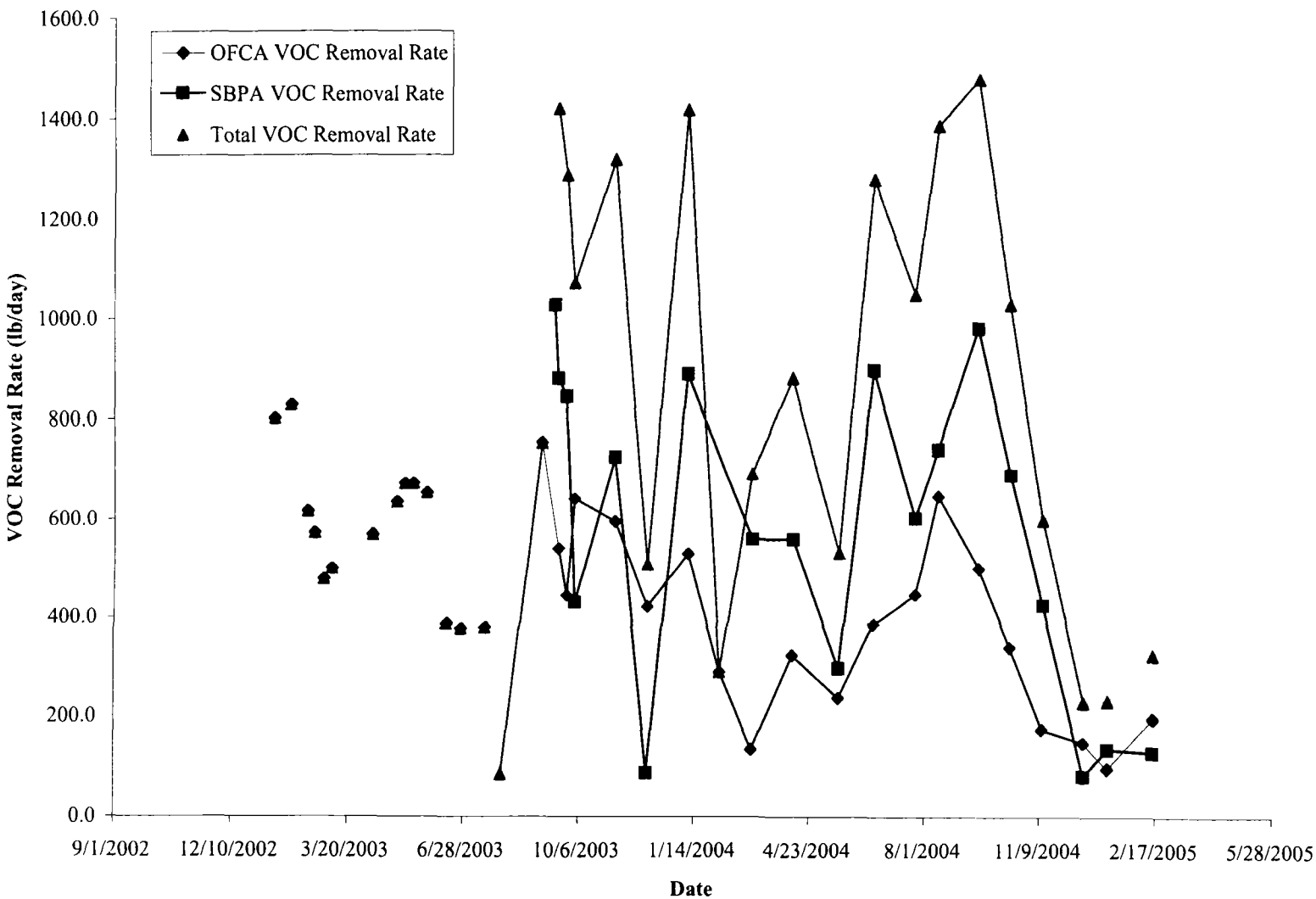
J:\209\0603 ACS\0306 ISVE O\Dewatering Data/SBPA GW Monitoring.2005.xls/Drawing 8

VOC Removal Rate
American Chemical Services NPL Site, Griffith, IN



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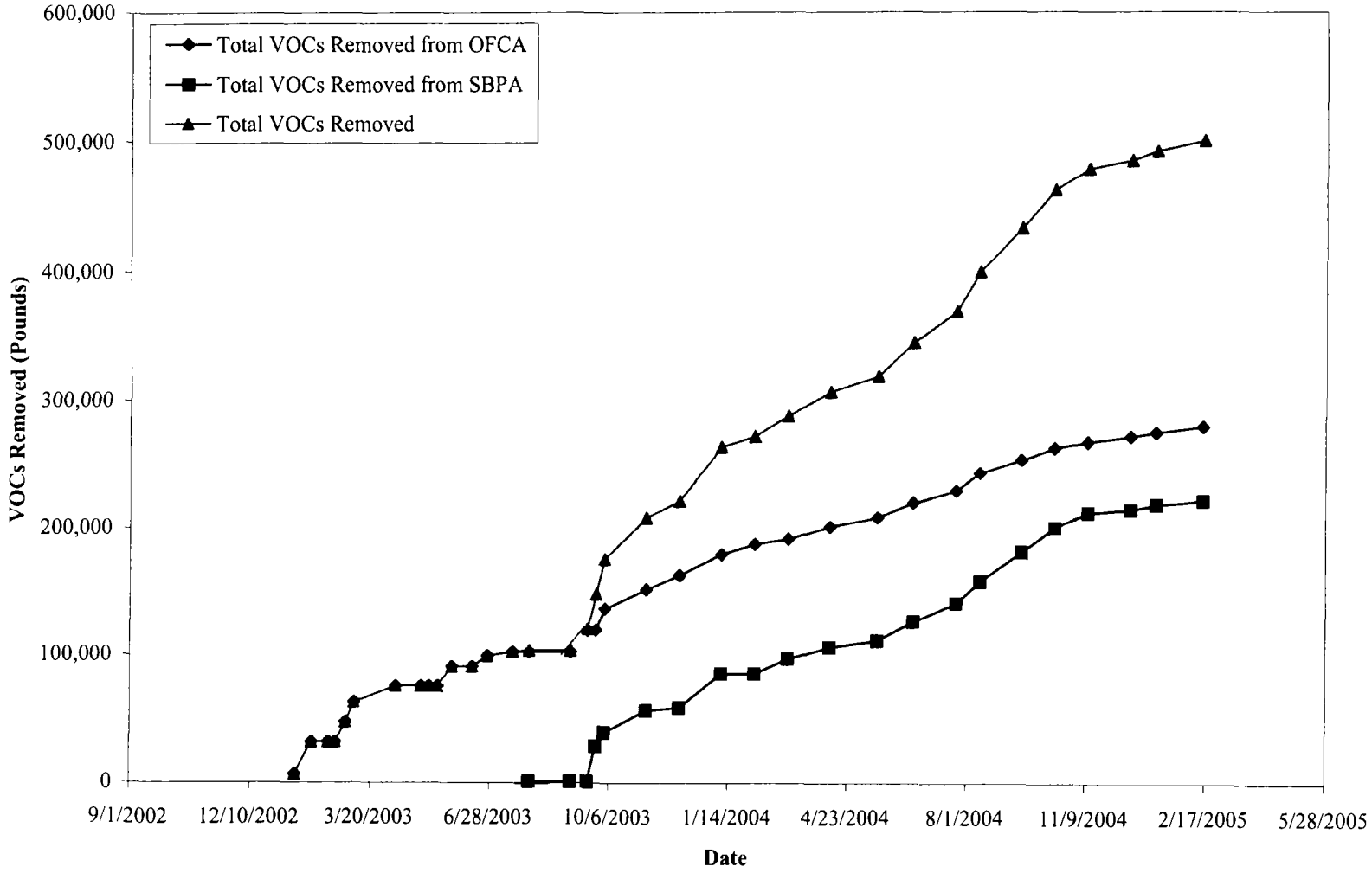
Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN



MBM/raa
J:\209\0603\Remedial System Metrics\ISVE\ISVE Mass Removal.xls

Weekly Oversight Summary Report No. 215
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 11, 2005
BVSPC O/S Dates: April 11 and 14, 2005 (Ms. Clark and Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
US Environmental Protection Agency	1	Federal Regulatory Agency
Environ	1	Respondent's Oversight Consultant
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
PSA Environmental	2	Chemical Oxidation Driller
ISOTEC	3	Chemical Oxidation Contractor
Walsh & Kelly	2	Traffic Control Contractor
Austgen	1	General Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza continued the second round of chemical oxidation injections on and around the property at 1002 Reder Road (began third 10-day shift).
- Montgomery Watson Harza conducted a chemical oxidation status meeting at the project site on April 14.

Activities Performed:

Montgomery Watson Harza (MWH) reported that it continued operating the groundwater treatment plant (GWTP), the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems and the OFCA and SBPA air sparge systems.

MWH reported that ACS has not reported any recurrence of detection of odors in the employee break room located on the SBPA cover.

ISOTEC and PSA Environmental returned to the site on April 11 to begin the final shift of In-Situ Chemical Oxidation (ISCO) injections in the South Area plume near the house at 1002 Reder Road. Walsh & Kelly (W&K) personnel provided traffic control for the ISCO injections in Colfax Avenue. MWH reported that it held a third-shift safety meeting on April 11 with ISOTEC, PSA, and W&K to focus on the new safety issues associated with traffic control and operating in the roadway of Colfax Avenue. MWH reported that tailgate safety meetings were also held prior to the beginning of work each day. MWH reported that it was monitoring air quality at the ISCO probe holes and in the worker's breathing zone, but had not detected any VOCs.

Observed W&K set up road signs and traffic cones to facilitate ISCO injections initially in the west lane of Colfax Avenue. MWH reported that 44 of 70 ISCO injection points in Colfax Avenue (and a total of 396 of the revised estimated maximum of 457) ISCO points had been injected as of the end of work on April 14. Remaining points are in the roadway and shoulders of Colfax Avenue.

Because of the theft of ISOTEC equipment on March 26/27, ISOTEC parks its truck and towed air compressor overnight adjacent to the GWTP. MWH continues to store the water regulator in the GWTP overnight to eliminate freezing problems.

MWH reported that it has and will continue to maintain contact with the City of Griffith and with the family at 1002 Reder Road regarding the status of the ISCO program.

MWH conducted an ISCO status meeting at the site on Thursday, April 14. Black & Veatch Special Projects (BVSPC) personnel attended this meeting and the April 11 safety meeting.

Topics of Concern: None.

Concern Resolution: None.

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to complete the second full-scale round of ISCO injections, including injections beneath Colfax Avenue.
- MWH to monitor odors in the ACS break room.
- MWH to assess results of additional soil gas samples to assess possible soil vapor intrusion into the house basement resulting from the smear zone in the South Area plume.
- MWH to change out granular activated carbon at GWTP in late April.
- Global Technologies to inspect thermox 2 in late April.
- MWH to complete its revised approach to completing the lower aquifer investigation and conduct the investigation in June.
- Next construction progress meeting will occur onsite at 2 PM on April 21.
- Post second round ISCO injection sampling will occur in May.
- Third round of ISCO injections tentatively scheduled for late June / early July.
- MWH to install noise containment structure to reduce noise from GWTP blower ME-102.

Signature: Larry Campbell Date: April 20, 2005

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Health and Safety Kick-off Meeting
Third 10-day Shift
Second Full-Scale Chemical Oxidation Application
ACS NPL Site
Griffith, Indiana

07:30 AM April 11, 2005

1. Personnel/Companies
   - MWH
   - PSA drilling
   - ISOTEC
   - Walsh & Kelly (traffic control)

2. ACS Site Introduction
   - ACS Site (warning system, etc.)
   - MWH Treatment Plant (sign-in sheet, restroom access, smoking/eating)
   - HAZWOPER forms

3. Schedule
   - Anticipated Daily Schedule for third 10-day shift
     - 08:00 – Health & Safety Tailgate meeting
     - 09:00 – Begin Lane Closure
     - 09:30 – Start Injecting
     - 02:30 – Stop Injecting
     - 03:00 – End Lane Closure (continue along shoulder?)
   - Currently 322 of 445 points completed

4. Health and Safety concerns
   - Traffic (cones, vests, signs)
   - Spill Control (keep dilution water nearby)
   - Work tents and heating hazards (fire extinguishers)
   - Temperature issues (cold weather)
   - Drilling Safety
   - Vehicle and Drum transport
   - Hazard Communication
   - Theft Prevention

5. Miscellaneous Items/Questions

AGENDA – SITE MEETING
APRIL 14, 2005
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 14, 2005

MEETING TIME: 10:00 AM

MEETING LOCATION: MWH Trailer at ACS

TOPICS:

CHEM-OX STATUS

- Health and Safety
  - Incidents/On-going issues.
  - Summary of Kick-Off meeting held April 11th.
- Progress Report
  - Number of points completed
  - Anything that has effected progress
  - Anything identified that could effect future progress
- Look-ahead Schedule
  - Current 10-day shift
  - Estimated completion date
- Interaction with Community
  - Colfax lane-closure issues
- Questions/Comments
  - Final Chem-Ox Status Meeting – April 21th

CAS/RAA
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WEEKLY CHEM-OX CONSTRUCTION MEETING MINUTES
FOR APRIL 14, 2005 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 14, 2005

MEETING TIME: 10:00 AM

MEETING LOCATION: MWH Trailer at ACS

ATTENDEES:
Kevin Adler – U.S. EPA (by telephone)
Larry Campbell – BVSPC
Lee Orosz – MWH
Chad Smith – MWH
Peter Vagt – MWH
Aaron Potts – Environ (by telephone)

TOPICS

Health and Safety Summary

The third ten-day shift began on Monday, April 11th, with a health and safety kick-off meeting. Representatives from MWH, BVSPC, ISOTEC, PSA, and Walsh & Kelly attended the meeting. Topics included: Site introduction and procedures, daily work schedule, and various work-specific safety concerns. Since work was beginning within Colfax Street, the meeting focused on traffic awareness, lane closure procedures, and communication issues.

There have been no health and safety incidents since the last meeting on Thursday, April 7th. MWH continues to monitor the air quality of the Chemical Oxidation (Chem-Ox) Treatment work area with a photo-ionization detector (PID). There have been no detections in the breathing zone of the workers. Walsh & Kelly has been overseeing the traffic closure of one lane of Colfax at a time so that work can proceed. There have been no incidents regarding the lane closures, and workers are only within the closed lane when necessary.

Progress Report

As work is nearing completion, MWH estimates that 457 injection points will be completed during this event. As of April 14th, 2005, MWH has completed 44 of 70 injection points within Colfax Street, and 396 out of 457 estimated injection points. The attached progress chart has been updated to reflect this information.

Look-Ahead Schedule

MWH is on track to complete the Second Full-Scale Chem-Ox event on March 18, 2005, two days ahead of the anticipated date. Injection activities within Colfax Street should be completed on Saturday, April 16th, one day ahead of schedule. Injection activities were slowed slightly due

to delay in the shipment of hydrogen peroxide to the site on April 14th. This is the final shipment of hydrogen peroxide for this event, so no further delays are expected.

Community Interaction

Other than questions from a few curious drivers, MWH is not aware of any problems or complaints made to the Town regarding the work occurring within Colfax Street. MWH contacted Jim Reyome (Director of the Griffith Public Works) on April 15th to inform him that the lane closures should be completed on Saturday, April 16th.

Look Ahead Schedule

April 14, 2005 through April 21, 2005	• Work within Colfax Street should be completed on Saturday April 16th. The 2nd Full-Scale Chem-Ox event should be completed on April 18th. • Enclosed with the minutes is a Progress Chart for the 2nd Full Scale Chem-Ox Injection through April 14th.
Health and Safety Items to Monitor	• Routine daily tailgate health and safety meetings for all work activities • Continued air monitoring in injection area • Traffic safety awareness • Practice proper chemical handling and storage procedures • Monitor wet weather conditions in advance.

Next Construction Meeting – Thursday, April 21, 2005, 2 P.M. at MWH Trailer at ACS

CAS/
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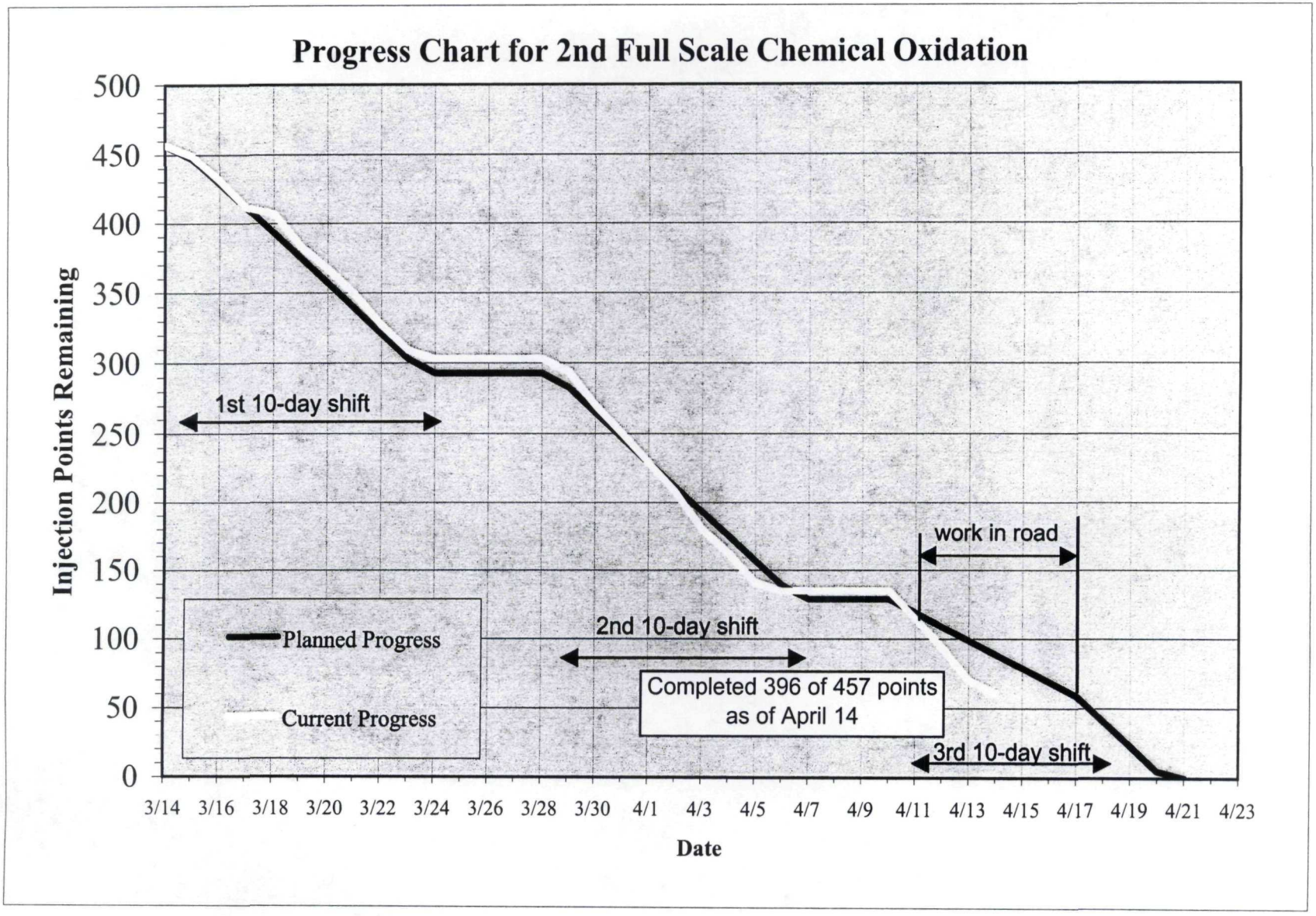
Progress Chart for 2nd Full Scale Chemical Oxidation
Injection Points Remaining
500
450
400
350
300
250
200
150
100
50
0
3/14
3/16
3/18
3/20
3/22
3/24
3/26
3/28
3/30
4/1
4/3
4/5
4/7
4/9
4/11
4/13
4/15
4/17
4/19
4/21
4/23
Date
1st 10-day shift
2nd 10-day shift
work in road
3rd 10-day shift
Planned Progress
Current Progress
Completed 396 of 457 points
as of April 14

Weekly Oversight Summary Report No. 216
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 18, 2005
BVSPC O/S Dates: April 21, 2005 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	4	Respondent's General Contractor
US Environmental Protection Agency	1	Federal Regulatory Agency
Indiana Department of Environmental Management	1	State Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
PSA Environmental	2	Chemical Oxidation Driller
ISOTEC	3	Chemical Oxidation Contractor
Walsh & Kelly	2	Traffic Control Contractor
Austgen	1	General Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza completed the second full-scale round of chemical oxidation injections on and around the property at 1002 Reder Road.
- Montgomery Watson Harza conducted a chemical oxidation status meeting at the project site on April 21.

Activities Performed:

Montgomery Watson Harza (MWH) reported that it continued operating the groundwater treatment plant (GWTP), the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, and the OFCA and SBPA air sparge systems.

MWH reported that ACS has not reported any recurrence of detection of odors in the employee break room located on the SBPA cover.

ISOTEC, PSA Environmental, and Walsh & Kelly (W&K) completed the final shift of the second full-scale round of In-Situ Chemical Oxidation (ISCO) injections in the South Area plume near the house at 1002 Reder Road. W&K personnel provided traffic control for the ISCO injections in Colfax Avenue. MWH reported that tailgate safety meetings with the ISCO contractors were held prior to the beginning of work each day. MWH reported that it monitored air quality at the ISCO probe holes and in the worker's breathing zone, but had not detected any VOCs.

MWH reported that a total of 456 ISCO points had been injected and all ISCO injection work had been completed on April 17. PSA and ISOTEC demobilized from the site on April 17 and April 18, respectively. With MWH permission, ISOTEC left six mixing tanks and some dry chemicals at the site for use during the planned third full-scale round of ISCO injections later this summer. The tanks are stored near the OFCA blower shed, and the dry chemicals are stored in sealed plastic bags within a 55-gallon drum in the secured area east of the GWTP. MWH reported that ISOTEC provided material safety data sheets (MSDSs) for the dry chemicals.

Because of the theft of ISOTEC equipment on March 26/27, ISOTEC parked its truck and towed air compressor overnight adjacent to the GWTP. MWH continued to store the water regulator in the GWTP overnight to eliminate freezing problems.

MWH reported that Jim Reyome, Griffith Director of Public Works, had visited the ISCO site and observed lane closures on Colfax Avenue and inspected patching of ISCO drill holes in the pavement. These holes were patched with black-colored cement grout. Mr. Reyome was satisfied with traffic flow and the pavement patching.

MWH conducted an ISCO status meeting at the site on Thursday, April 21. Black & Veatch Special Projects (BVSPC) personnel attended this meeting.

Topics of Concern: None.

Concern Resolution: None.

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to monitor odors in the ACS break room.
- MWH to assess results of additional soil gas samples to assess possible soil vapor intrusion into the house basement resulting from the smear zone in the South Area plume.
- MWH to change out granular activated carbon at GWTP in late April.
- Global Technologies to inspect thermox 2 in late April.
- MWH to complete its revised approach to completing the lower aquifer investigation and conduct the investigation in June.
- Next operation & maintenance meeting will occur at MWH Chicago office at 10:30 AM on May 6.
- Post second round ISCO injection sampling will occur in May.

- Third round of ISCO injections tentatively scheduled for late June / early July.
- MWH to install noise containment structure to reduce noise from GWTP blower ME-102.

Signature: Larry Campbell Date: April 27, 2005

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PROPOSED AGENDA – SITE MEETING
APRIL 21, 2005
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 21, 2005

MEETING TIME: 02:00 PM

MEETING LOCATION: MWH Trailer at ACS

TOPICS:

CHEM-OX STATUS

- Health and Safety
  - Incident Summary
  - Air Monitoring Summary
  - Traffic Control Summary

- Second Full-Scale In-situ Chemical Oxidation (ISCO) Treatment Event
  - Completion Date
  - Number of points completed points

- Look-ahead Schedule
  - Second Full-Scale (FS2) ISCO Treatment Report
  - FS2 Post-Application Sampling Event
  - Third Full-Scale (FS3) ISCO Treatment Event

- Interaction with Community
  - Colfax lane-closure issues

- Questions/Comments

CAS/RAA
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WEEKLY CHEM-OX CONSTRUCTION MEETING MINUTES FOR APRIL 21, 2005 MEETING AMERICAN CHEMICAL SERVICE, NPL SITE GRIFFITH, INDIANA

MEETING DATE: Thursday, April 21, 2005

MEETING TIME: 2:00 PM

MEETING LOCATION: MWH Trailer at ACS

ATTENDEES:
Kevin Adler – U.S. EPA
Larry Campbell – BVSPC
Prabhakar Kasarabada - IDEM
Matthew Mesarch – MWH
Peter Vagt – MWH

TOPICS

Health and Safety Summary

There have been no health and safety incidents since the last meeting on Thursday, April 14th. MWH monitored the air quality of the work area with a photo-ionization detector (PID). There were no detections in the breathing zone of the workers.

Walsh & Kelly continued to oversee the traffic closure of one lane of Colfax at a time so that work could proceed. There were no incidents regarding the lane closures, and workers were only within the closed lane when necessary. Work in the road was finished on Saturday, April 16th.

Progress Report

MWH finished the second full-scale Chem-Ox application on Sunday, April 17th with a total of 436 injection points completed. PSA Environmental left the site that day following completion of the work. ISOTEC remained onsite until Monday, April 18th to pack their trucks before returning home. They received permission from MWH to leave six of their mixing tanks and some dry chemicals onsite for the third injection. The dry chemicals are stored in sealed plastic bags within a 55-gallon drum inside the secured area on the east side of the groundwater treatment plant (GWTP). ISOTEC also provided MWH with material safety data sheets (MSDSs) for the dry chemicals.

MWH is in the process of writing a letter to the Agencies that will summarize the second full-scale injection event and propose the follow-up performance monitoring sampling event.

Community Interaction

MWH spoke with Mr. Jim Reyome of the Griffith Department of Public Works in regards to the work in the road. Mr. Reyome expressed satisfaction with the way that traffic flow was managed during the lane closures. He also inspected several of the completed boreholes and was satisfied with the job PSA Environmental had done to patch the holes.

Look Ahead Schedule

MWH anticipates submitting the second full-scale injection event summary letter to the Agencies by April 29, 2005. In the letter, MWH will propose conducting the performance monitoring sampling event from May 16-20, 2005. MWH anticipates submitting a letter report summarizing the results of the sampling event in early July. This letter report will include a proposal for a third full-scale injection, which is expected to take place in late July provided that groundwater levels are within acceptable limits.

Questions/Comments

Mr. Campbell inquired as to how many injection events would be required. Dr. Vagt indicated that MWH intends to propose a third event. A fourth event has not been ruled out if necessary to treat the smear zone beneath Colfax Street.

Mr. Adler asked whether a cleanup level had been agreed upon. Dr. Vagt said that while no cleanup levels were specified in the Record of Decision, and that numbers would be proposed based on the sampling results after the final application.

Mr. Kasarabada suggested that MWH collect soil and groundwater samples outside the impacted area to serve as a reference for sample results collected within the smear zone. MWH agreed to consider this in their sampling plan.

Next Construction Meeting – Friday, May 6, 2005, 10:30 a.m. in the MWH offices at 175 West Jackson Boulevard.

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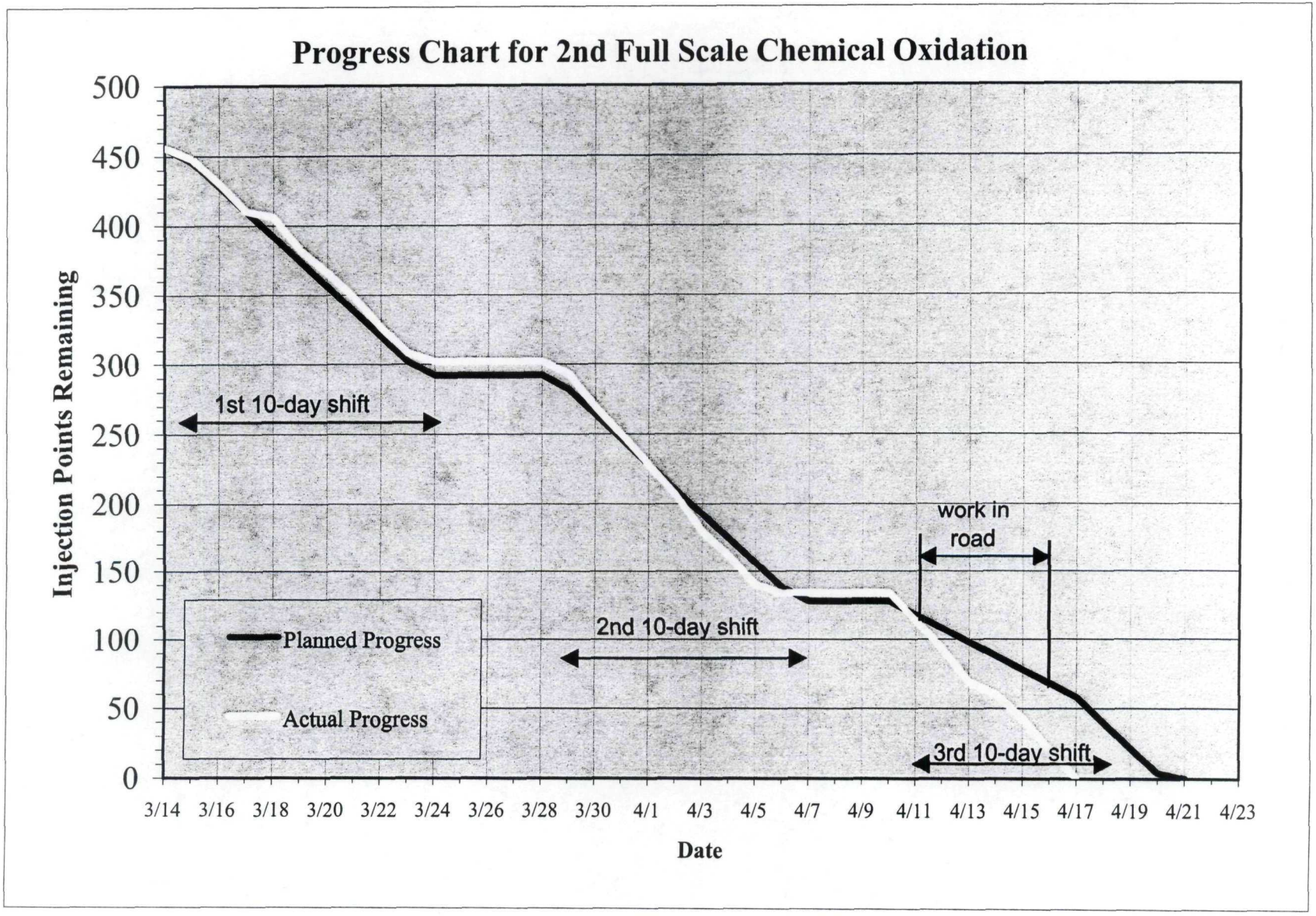
Progress Chart for 2nd Full Scale Chemical Oxidation
Injection Points Remaining
500
450
400
350
300
250
200
150
100
50
0
3/14
3/16
3/18
3/20
3/22
3/24
3/26
3/28
3/30
4/1
4/3
4/5
4/7
4/9
4/11
4/13
4/15
4/17
4/19
4/21
4/23
Date
1st 10-day shift
2nd 10-day shift
3rd 10-day shift
work in road
Planned Progress
Actual Progress

Weekly Oversight Summary Report No. 217
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 25, 2005
BVSPC O/S Dates: April 28, 2005 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	1	General Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza cleaned up discharge of oily groundwater from Still Bottoms Pond Area dual phase extraction well.
- Fliteway delivered and installed noise reduction enclosure for blower ME-102.

Activities Performed:

Montgomery Watson Harza (MWH) reported that it continued operating the groundwater treatment plant (GWTP), the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, and the OFCA and SBPA air sparge systems.

MWH reported that ACS has not reported any recurrence of detection of odors in the employee break room located on the SBPA cover.

MWH reported on April 25 that SBPA ISVE dual phase extraction (DPE) well SVE-46 had discharged 50 to 100 gallons of groundwater containing product onto the SBPA cover. This discharge flowed into the catch basin at the north edge of the cover and then flowed on into the first (or three) ACS stormwater vaults northwest of the SBPA cover. MWH reported an oil sheen on the water surface in vault 1, but not on the surface of liquid in the second and third stormwater vaults. MWH reported that it removed the DPE pump from well SVE-46 and stored it in the hazardous waste roll-off area at the GWTP for later inspection. MWH plugged the DPE discharge line and reactivated the DPE system. MWH reported that it believed the SVE-46 check valve failed.

MWH reported that it coordinated with ACS and pumped liquid from the catch basin and stormwater vaults 1 and 2 directly into the MWH GWTP biotank. MWH used high pressure hose and a limited amount (~1 quart) of muriatic acid to wash down the SBPA cover and the sides of the catch basin and vaults. Approximately 3,000 gallons of water were used and then pumped into the biotank.

MWH reported that Fliteway delivered and installed a noise reduction enclosure to surround blower ME-102 at the GWTP. Noise levels near the blower dropped significantly. MWH had taken instrument readings of the noise levels before the installation of the enclosure and will take additional readings to document the amount of noise level reduction.

MWH reported that its corporate health and safety officer was onsite April 28 and 29 to conduct an internal audit of the ACS health and safety program. The program received a 100% passing score.

MWH reported that the planned Global Technologies inspection of thermox 2 had been delayed until May 3.

Topics of Concern: None.

Concern Resolution: None.

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to monitor odors in the ACS break room.
- MWH to assess results of additional soil gas samples to assess possible soil vapor intrusion into the house basement resulting from the smear zone in the South Area plume.
- MWH to change out granular activated carbon at GWTP in late April.
- Global Technologies to inspect thermox 2 in early May.
- MWH to complete its revised approach to completing the lower aquifer investigation and conduct the investigation in June.
- Next operation & maintenance meeting will occur at MWH Chicago office at 10:30 AM on May 6.
- Post second round ISCO injection sampling will occur in May.
- Third round of ISCO injections tentatively scheduled for late June / early July.
- MWH to measure reduced noise levels at GWTP blower ME-102.

Signature: Larry Campbell Date: May 3, 2005

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Weekly Oversight Summary Report No. 218
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of May 2, 2005
BVSPC O/S Dates: May 6, 2005 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
US Environmental Protection Agency	1	Federal Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	1	General Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Global Technologies inspected thermal oxidizer 2.
- Montgomery Watson Harza conducted the monthly operation and maintenance meeting at its Chicago office on May 6.

Activities Performed:

Montgomery Watson Harza (MWH) reported that the groundwater treatment plant (GWTP) was operational 100% of the time in April, processing groundwater at average rates of 25 to 40 gpm. MWH reported that water was being pumped to the GWTP from all trench and well sources. The GWTP was shut down for two days during the reporting period because of the inspection of thermal oxidizer 2 (thermox 2).

MWH continued to operate the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, and the OFCA and SBPA air sparge systems.

MWH reported that during April, thermox 1 processed 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 23 (of 46) ISVE wells. MWH also reported that thermox 2 processed 1,000 cfm of vapors from the OFCA ISVE system, collecting vapors from 28 (of 42) ISVE wells and aeration tank T102. The SBPA and OFCA ISVE systems were operational, respectively, 29 and 28 out of 30 days (97% and 93% of the time).

MWH reported that both ISVE systems had been shut down for parts of two days this week while Global Technologies inspected thermox 2. MWH reported thermox 2 would shut down because of high exit temperatures when both OFCA blowers were operating. In order to maintain operations of the OFCA ISVE system, MWH reported that it is currently operating only one of the two blowers at a time, cycling the operation of the two blowers.

A Global Technologies technician was onsite on May 3 and 4 to conduct a thorough inspection of the Global-manufactured thermox 2 heat exchanger and scrubber. Global found that 5 of the 300 tubes in the heat exchanger had deteriorated. MWH is awaiting recommendations from Global regarding repair of the unit. MWH is considering blocking the five deteriorated tubes.

Global reoriented the spray nozzles in the thermox 2 scrubber, which may allow operation of both OFCA ISVE blowers.

While thermox 2 was being inspected, MWH performed maintenance on thermox 1 and inspected the recoated interior of the thermox 1 scrubber.

MWH reported that it pumped 14 gallons of product from three ISVE wells in the SBPA during April. The product was transferred to the oil holding tank T6 in the GWTP.

MWH reported that ACS has not reported any recurrence of detection of odors in the employee break room located on the SBPA cover.

MWH reported that it had measured noise levels at the same locations where it had measured them prior to installing the noise reduction enclosure around blower ME-102. MWH presented a graph and table summarizing the before and after noise levels at various distances from blower ME-102.

MWH conducted the monthly operation and maintenance (O&M) meeting (summarizing April performance statistics) in its Chicago office on May 6. Black & Veatch Special Projects (BVSPC) personnel attended this meeting.

Topics of Concern: None.

Concern Resolution: None.

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to monitor odors in the ACS break room.
- MWH to conduct 24-hour indoor air sampling in the house at 1002 Reder Road in late May.
- MWH to change out granular activated carbon at GWTP in early May.
- Global Technologies to provide its report regarding the inspection of thermox 2.

- MWH to submit it's Phase 1 lower aquifer investigation report and proposed plan for Phase 2 investigation by May 13 and conduct the investigation in mid-June.
- Next O&M meeting will occur at MWH's Chicago office at 10 AM on June 3.
- Post second round ISCO injection sampling will occur May 31 - June 3.
- Third round of ISCO injections tentatively scheduled for late June / early July.

Signature: Larry Campbell Date: May 12, 2005

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SITE MEETING AGENDA
MAY 6, 2005
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: ~~Thursday~~ Friday, May 6, 2005

MEETING TIME: 10:30

MEETING LOCATION: MWH Chicago Office
175 West Jackson Blvd., Suite 1900

TOPICS:

SITE STATUS
- Health and Safety Summary
- GWTP Status
- ISVE Systems Status (incl. Thermal Oxidizers)
- Interaction with ACS Facility or Community

CURRENT ISSUES
- Lower Aquifer Groundwater Investigation
- Soil Vapor Intrusion at 1002 Reder Road
- Post-Application Sampling for Second Full-scale Chemical Oxidation Treatment
- Failed check valve in SVE-46
- SBPA ISVE System Upgrades

MISCELLANEOUS
- Open

LOOK AHEAD
Field Events
- ISVE Monitoring – May 18 (tentative)

Reports
- Monthly Status Report – May 9
- Quarterly Report, 3rd Quarter 2004 – Comments received
- Quarterly Report, 4th Quarter 2004 – sent to Agencies in April
- Lower Aquifer Investigation, Phase I Report – May 13
- Summary of Second Full-scale Chemical Oxidation Treatment – May 13
- SBPA Cover CCR – Comments received; RTCs submitted on March 25
- ISVE Systems O&M Manual – Further comments received
- HASP Update – to be submitted in May 2005
- March 2005 Groundwater Monitoring Summary Report – June 2005

Health & Safety Look Ahead

ACS STATUS MEETING MINUTES
FOR MAY 6, 2005 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Friday, May 6, 2005

MEETING TIME: 10:30

MEETING LOCATION: MWH Chicago Office

ATTENDEES:
Kevin Adler - U.S. EPA
Larry Campbell – Black & Veatch
Rob Adams – MWH
Amy Clore - MWH
Chris Daly – MWH
Todd Lewis – MWH
Jonathan Pohl – MWH
Chad Smith – MWH
Peter Vagt - MWH

TOPICS:

General Note: The May 6th meeting covered all site activities since the last Operations & Maintenance meeting on April 7th.

SITE STATUS

Health and Safety Summary

There have been no health and safety issues since the last meeting on April 7th. An internal audit was conducted at MWH's facilities at the ACS Site by the head of MWH Constructors Health and Safety, Mike Grasso. The result of the audit was a 100 percent passing score.

A carbon change-out will be occurring at the Groundwater Treatment Plant within the next two weeks. Confined space entry will not be required with this scheduled change out.

Groundwater Treatment Plant (GWTP) Status

The GWTP varied between 25 to 40 gallons per minute (gpm) in April. Pumping occurred from all available sources. The effluent analytical data for April (yet to be validated) showed that the GWTP operated in compliance with the discharge standards for the plant.

The GWTP was shut down on May 4th while the two Thermal Oxidizer units were inspected and routine maintenance was completed.

Off-Site Area/SBPA ISVE Systems

The ISVE systems were both operational approximately 95 percent of the time during April. The systems were occasionally shutdown briefly while work was completed on the thermal oxidizers.

MWH performed maintenance tasks including inspection of interior scrubber coating on Thermal Oxidizer 1 (Therm Ox 1).

Representatives from Global Technologies were on site from May 3rd through May 5th to perform an inspection of Thermal Oxidizer 2 (Therm Ox 2). The inspection revealed that five of the 300 tubes in the heat exchanger have deteriorated. MWH is discussing various options for repair of the heat exchanger. One possibility will be to block the deteriorated tubes. MWH will receive a detailed summary report of Global's inspection.

During Global's inspection of the unit, they reoriented the spray nozzles in the quench section of the scrubber. This action may allow full operation of the Off-Site ISVE system that has been limited to one of the two blowers.

On Monday, April 25, Lee Orosz (MWH) was notified by ACS personnel that SVE-46 was leaking water. The water was escaping through failed check valve, coming out of the top of the well casing and was running down the cap to the stormwater collection system. None of the leaked water had migrated behond the first of the three stormwater collection vaults. . The pump was immediately shut down and removed for inspection and service. Then the affected cap area was scrubbed down and the stormwater drain was flushed from the entry point to the vault. The water in the vault was pumped to the biotank for treatment. The vault was then cleaned with high-pressure water. This wash water was also pumped back to the biotank. MWH is working with Austgen to ensure controls are implemented that will prevent a reoccurrence of such an incident.

The Off-Site and SBPA air sparge systems were operational during April.

Interaction with Community

MWH has installed a soundproof enclosure over one of the large blowers at the GWTP. MWH employees have noticed a significant decrease in noise with the enclosure present. High temperatures have been observed in the new blower house. It may be necessary to install a fan in order to circulate the air and lower the temperature, MWH is monitoring the unit's temperatures to assess the need. In the next few weeks MWH will invite the resident who was concerned with the blower noise, to the site to get a first hand look at the new enclosure set up.

Lower Aquifer Investigation

The Lower Aquifer Investigation Report is currently distributed for Client Review and is scheduled to be submitted to the Agencies on May 13th. Fieldwork will begin in June after approval by the Agencies. Five wells will be installed at a 50-foot spacing and run parallel to the railroad tracks. One well will be utilized for a pumping test while the other four will be used for observation wells during the pumping test and for collecting groundwater samples. In order for the drill rig to have access to the area it will likely

require an access path through the wetlands. MWH corespond with IDEM officials to be sure that the planned work will conform to applicable wetland regulations and associated permits). The drilling subcontractor, Boart Longyear, is scheduled to be on site to view the work area within the next two weeks.

Soil Vapor Sampling Event

MWH is preparing for an indoor air sampling event at the residential house located at the corner of Reder Rd. and Colfax Ave. as outlined in the soil vapor proposal. The sample will span 24 hours. It will be collected using a summa canister fitted with a flow controller. The residents have been notified of the event, which is expected to conducted during the week of May 23rd.

Chemical Oxidation Treatment

MWH finished the second full-scale Chem-Ox application on Sunday, April 17th with a total of 456 injection points completed. A letter to the Agencies summarizing the second full-scale injection event and proposing the follow-up performance sampling is scheduled for distribution to the Agencies on May 13th. The report proposes the twelve locations that will be sampled. The sampling event is scheduled to take place during the week of May 30th

LOOK AHEAD

Field Events

- ISVE Monitoring – May 18 (tentative)
- Carbon changeout at GWTP – May
- Soil vapor sampling - May

Reports

- Monthly Status Report – May 6
- HASP Update – to be submitted in May
- Lower Aquifer Investigation – May 13
- Quarterly Monitoring Report, 1st Quarter 2005 – end of May

Health & Safety Look Ahead

- Routine daily tailgate health and safety meetings for all work activities
- Work associated with the carbon changeout
- During the springtime, bees and wasps are a concern around the site.

Future Meetings

- Status Meeting – Friday, June 3, 2005, 10 a.m. at the MWH Chicago Office.

ALC/CAD/PJV
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Remedial Progress Report (Internal Use Only)	April-05		Report Date: 5/4/2005

GWTP & Dewatering

The GWTP was operational for 30 days out of 30 days in April (100%).
Total Gallons treated = 1,316,715 gallons since 3/25/05 (35 days).

Ave. Flow Rate (gpm)	
3/25/05	25
4/1/05	25
4/8/05	30
4/15/05	Varies 25-40
4/22/05	Varies 25-40
4/29/05	Varies 25-40

*Red Number

Tables, Graphs & Figures
Table - Effluent Summary
Graphs - Off-Site Dewatering
Graphs - SBPA Dewatering

SBPA ISVE System

System was operational 29 out of 30 days in April (97%).
System monitoring was not conducted during April.
The next monitoring event is scheduled for 5/18/05.

Product Removal	
SVE-52	1 gal
SVE-53	12 gal
SVE-62	1 gal
SVE-72	Pump down
SVE-88	Pump down

Active Wells (23 of 46 total)	
SVE-43	SVE-67
SVE-45	SVE-68
SVE-47	SVE-70
SVE-48	SVE-71
SVE-55	SVE-74
SVE-56	SVE-75
SVE-57	SVE-76
SVE-58	SVE-83
SVE-59	SVE-85
SVE-60	SVE-86
SVE-63	SVE-87
SVE-64	

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC removal

Off-Site ISVE System

System was operational 28 out of 30 days in April (93%).
System monitoring was not conducted during April.
The next monitoring event is scheduled for 5/18/05.

Active Wells (28 of 42 total)	
SVE-01	SVE-21
SVE-03	SVE-23
SVE-04	SVE-25
SVE-05	SVE-26
SVE-07	SVE-27
SVE-08	SVE-29
SVE-09	SVE-30
SVE-11	SVE-31
SVE-13	SVE-33
SVE-14	SVE-36
SVE-15	SVE-37
SVE-16	SVE-38
SVE-19	SVE-39
SVE-20	SVE-41

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC removal

Comments

Data presented here is for informational purposes only. Not all data presented in this report has been validated.

Table 1
Summary of Effluent Analytical Results - March 2005
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 92 1/19/2005	Month 93 2/15/2005	Month 94 3/15/2005	Effluent Limits	Lab Reporting Limits
pH	7.43	7.06 /J	7.43 /J	6-9	none
TSS	1.87	NS	NS	30	10
BOD	< 2	NS	NS	30	2
Arsenic	7.0 B/	NS	NS	50	3.4
Beryllium	ND	NS	NS	NE	0.2
Cadmium	ND	NS	NS	4.1	0.3
Manganese	1.9 B/	NS	NS	NE	10
Mercury	ND	NS	NS	0.02 (w/DL = 0.64)	0.64
Selenium	ND	NS	NS	8.2	4.3
Thallium	ND	NS	NS	NE	5.7
Zinc	ND	NS	NS	411	1.2
Benzene	0.14 J/	0.14 J/	ND	5	0.5
Acetone	1.0 JB/	2.4 J/J	2.2 JB/ 10 UBJ	6,800	3
2-Butanone	ND	ND	ND	210	3
Chloromethane	ND	ND	ND	NE	0.5
1,4-Dichlorobenzene	ND	ND	ND	NE	0.5
1,1-Dichloroethane	ND	ND	ND	NE	0.5
cis-1,2-Dichloroethene	0.71 /	0.57 /	ND	70	0.5
Ethylbenzene	ND	0.14 J/	ND	34	0.5
Methylene chloride	1.8 /	1.0 /J	1.2 /J	5	0.6
Tetrachloroethene	0.17 J/	0.16 J/	ND	5	0.5
Trichloroethene	ND	0.12 JB/UB	ND	5	0.5
Vinyl chloride	ND	0.22 J/	0.36 J/J	2	0.5
4-Methyl-2-pentanone	ND	ND	ND	15	3
bis (2-Chloroethyl) ether	ND	NS	NS	9.6	9.6
bis(2-Ethylhexyl) - phthalate	ND	NS	NS	6	6
4 - Methylphenol	ND	NS	NS	34	10
Isophorone	ND	NS	NS	50	10
Pentachlorophenol	ND	NS	NS	1	1
PCB/Aroclor-1016	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	ND	NS	NS	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Bolded result indicates a exceedence of the discharge limit

pH data is expressed in S.U.

Metals, VOC, SVOC and PCB data is expressed in ug/L

ND = Not detected

NS = This analyte was not sampled or analyzed for

NE = No effluent limit established.

DL = Detection limit

* = Approved SW-846 method is incapable of achieving effluent limit.

Suffix Definitions:

_/ = Data qualifier added by laboratory

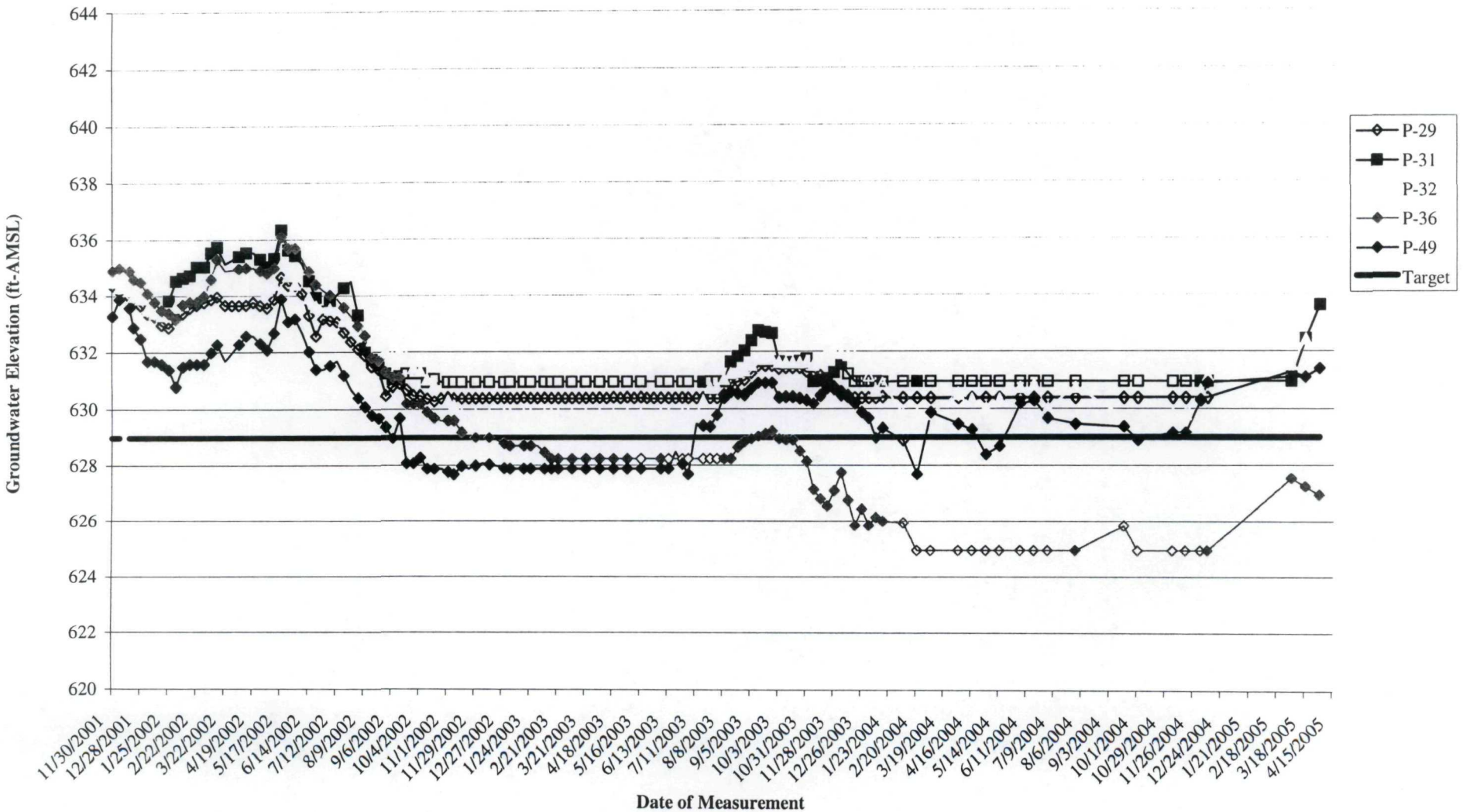
/_ = Data qualifier added by data validator

J = Result is detected below the reporting limit and is an estimated concentration
concentration and the compound is also detected in the method blank resulting in a potential high bias

JB = Analyte is detected in the sample below the reporting limit and is an estimated

UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination,
however the calibration was out of range. Therefore the concentration is estimated.

Figure 1
SBPA Water Level Status
ACS NPL Site
Griffith, Indiana



Note:
Hollow points represent dry piezometers (data used for graphing purposes only).
The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

ALC/jmf/CAD
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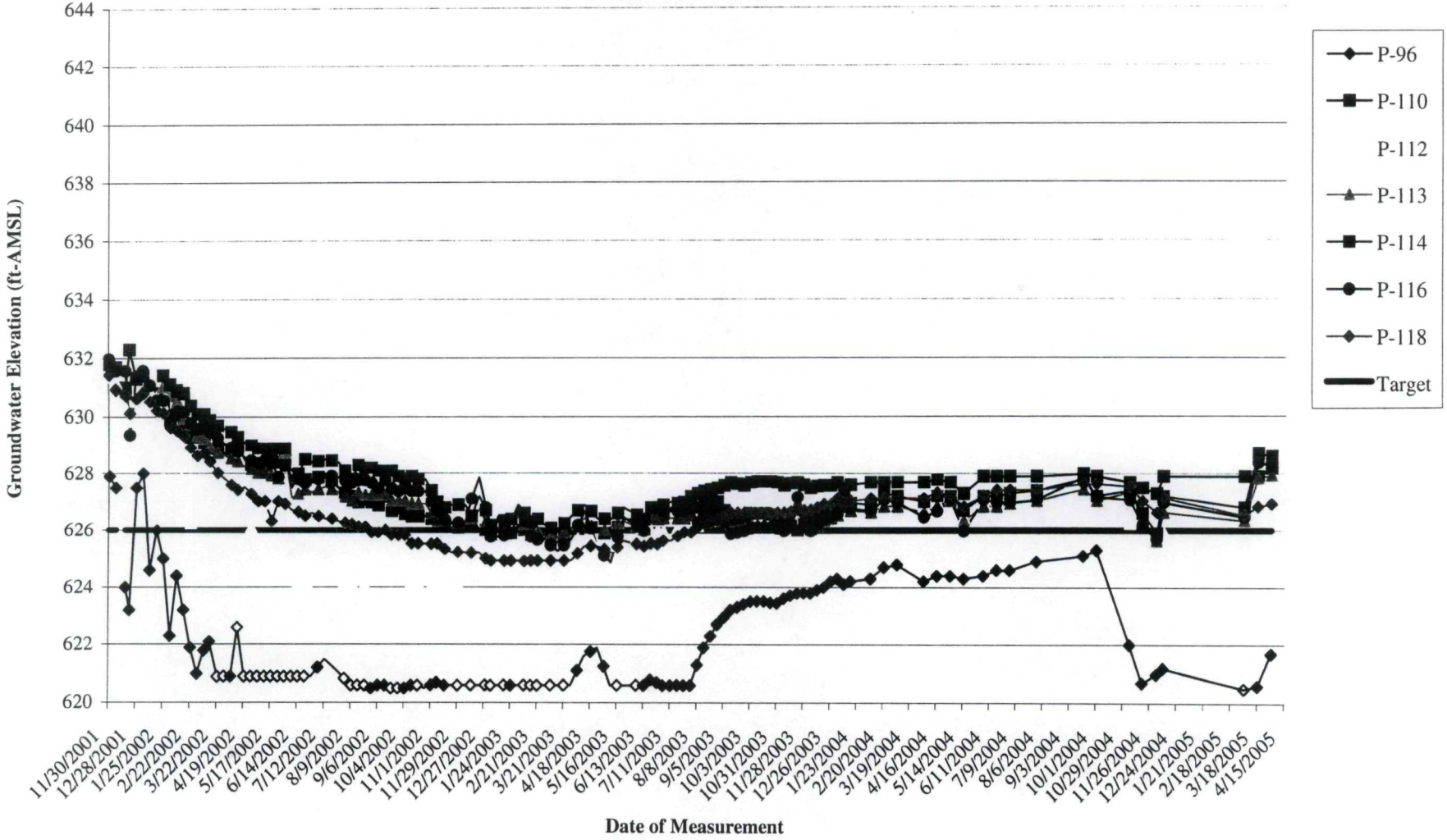
Figure 2
Off-Site Water Level Status - Piezometers
Groundwater Monitoring
ACS NPL Site
Griffith, Indiana



Note:
Hollow points represent dry piezometers
(data used for graphing purposes only). The bottom elevation of the piezometers may vary due to silting

ALC/jmf
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Table 6
SBPA and Off-site ISVE Results for Method TO-14 (VOCs)
March 2005
American Chemical Service NPL Site
Griffith, Indiana

		Sampled 3/17/2005			
Compounds	**Units**	**SBPA ISVE**		**Off-Site ISVE**	
1,1,1-Trichloroethane	ppbv	51,000		43,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	ND	U
1,1-Dichloroethane	ppbv	3,900		5,700	
1,1-Dichloroethene	ppbv	500		350	J/J
1,2-Dichloroethane	ppbv	360		1,700	
1,2-Dichloropropane	ppbv	330	_J	600	J/J
2-Butanone (Methyl Ethyl Ketone)	ppbv	810	J/J	24,000	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	1,400		14,000	
Acetone	ppbv	1,600		25,000	
Benzene	ppbv	7,200		35,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	ND	U	ND	U
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	860		ND	U
Chloroform	ppbv	8,500		3,200	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	19,000		3,300	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	12,000		31,000	
m,p-Xylene	ppbv	54,000		140,000	
Methylene Chloride	ppbv	12,000		48,000	
o-Xylene	ppbv	21,000		49,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	29,000		51,000	
Toluene	ppbv	62,000		230,000	
trans-1,2-Dichloroethene	ppbv	ND	U	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	37,000		31,000	
Vinyl Chloride	ppbv	1,300		400	J/J
Total	**ppbv**	**323,760**		**736,250**	
Total	**lb/hr**	**7.26**		**18.76**	

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour
3/17/05 VOCs in lb/hr calculated based on Offsite: 1550 scfm, 55 degrees Fahrenheit (3/9/05)
On-site: 1200 scfm, 40 degrees Fahrenheit (3/9/05)

Qualifiers:
J - Result is estimated
U - below reported quantitation limit

CAS/ALC/cad
J:/209/0601 ACS/0202/msr/Jan 05 thru current/April Tables/TO-14 ISVE.xls

Table 7
SBPA and Off-site ISVE Results for Method TO-13 (SVOCs)
March 2005
American Chemical Service NPL Site
Griffith, Indiana

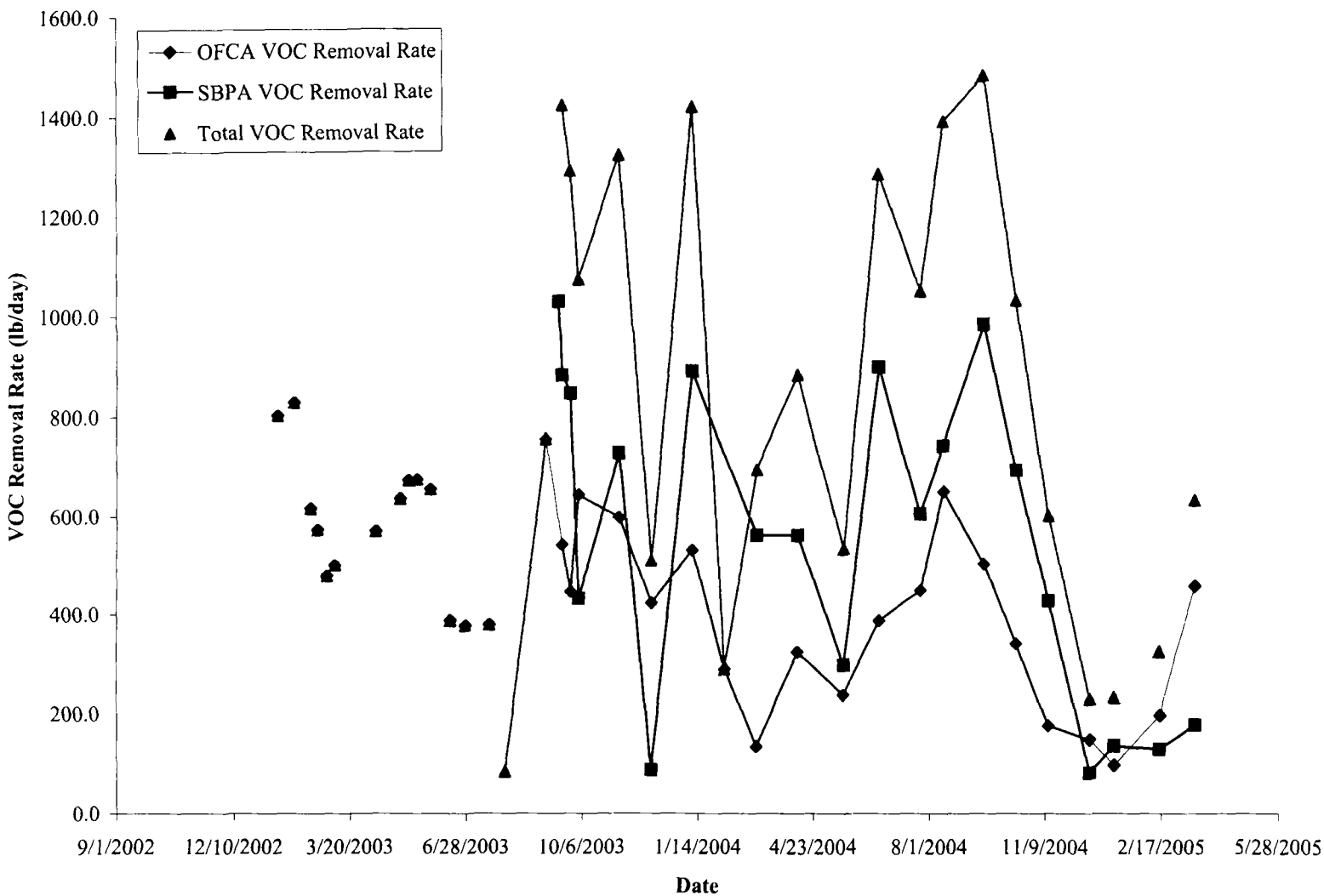
		Sampled 3/17/2005			
CompouUs	Units	SBPA ISVE		Off-Site ISVE	
1,2,4-Trichlorobenzene	µg	ND	U	ND	ND
1,2-Dichlorobenzene	µg	2		6.6	
1,3-Dichlorobenzene	µg	ND	U	ND	U
1,4-Dichlorobenzene	µg	0.4	J	0.79	J
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	0.86	J	0.71	J
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo(a)anthracene	µg	ND	U	ND	U
Benzo(a)pyrene	µg	ND	U	ND	U
Benzo(b)fluoranthene	µg	ND	U	ND	U
Benzo(g,h,i)perylene	µg	ND	U	ND	U
Benzo(k)fluoranthene	µg	ND	U	ND	U
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U
bis(2-Chloroethyl) Ether	µg	ND	U	ND	U
bis(2-Ethylhexyl)phthalate	µg	ND	U	ND	U
Butylbenzylphthalate	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz(a,h)anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethylphthalate	µg	0.46	J/B	0.53	J/B
Dimethylphthalate	µg	ND	U	ND	U
di-n-Butylphthalate	µg	ND	U	ND	U
Di-n-Octylphthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	ND	U	ND	U
Hexachlorocyclopentadiene	µg	ND	U	ND	U
Hexachloroethane	µg	ND	U	ND	U
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U
Isophorone	µg	0.57	J	3.5	
Naphthalene	µg	3.0		5.4	
Nitrobenzene	µg	ND	U	ND	U
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
Total	µg	7.3		17.53	

Notes:
_/ - Laboratory data qualifier
/_ - Data validation qualifier
µg - Microgram
NC - Not calculated
ND - Non-detect

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
B - Compound is also detected in the blank

3/17/05 VOCs in lb/hr calculated based on Offsite: 1550 scfm, 55 degrees Fahrenheit (3/9/05)
On-site. 1200 scfm, 40 degrees Fahrenheit (3/9/05)

VOC Removal Rate
American Chemical Services NPL Site, Griffith, IN



MBM/raa
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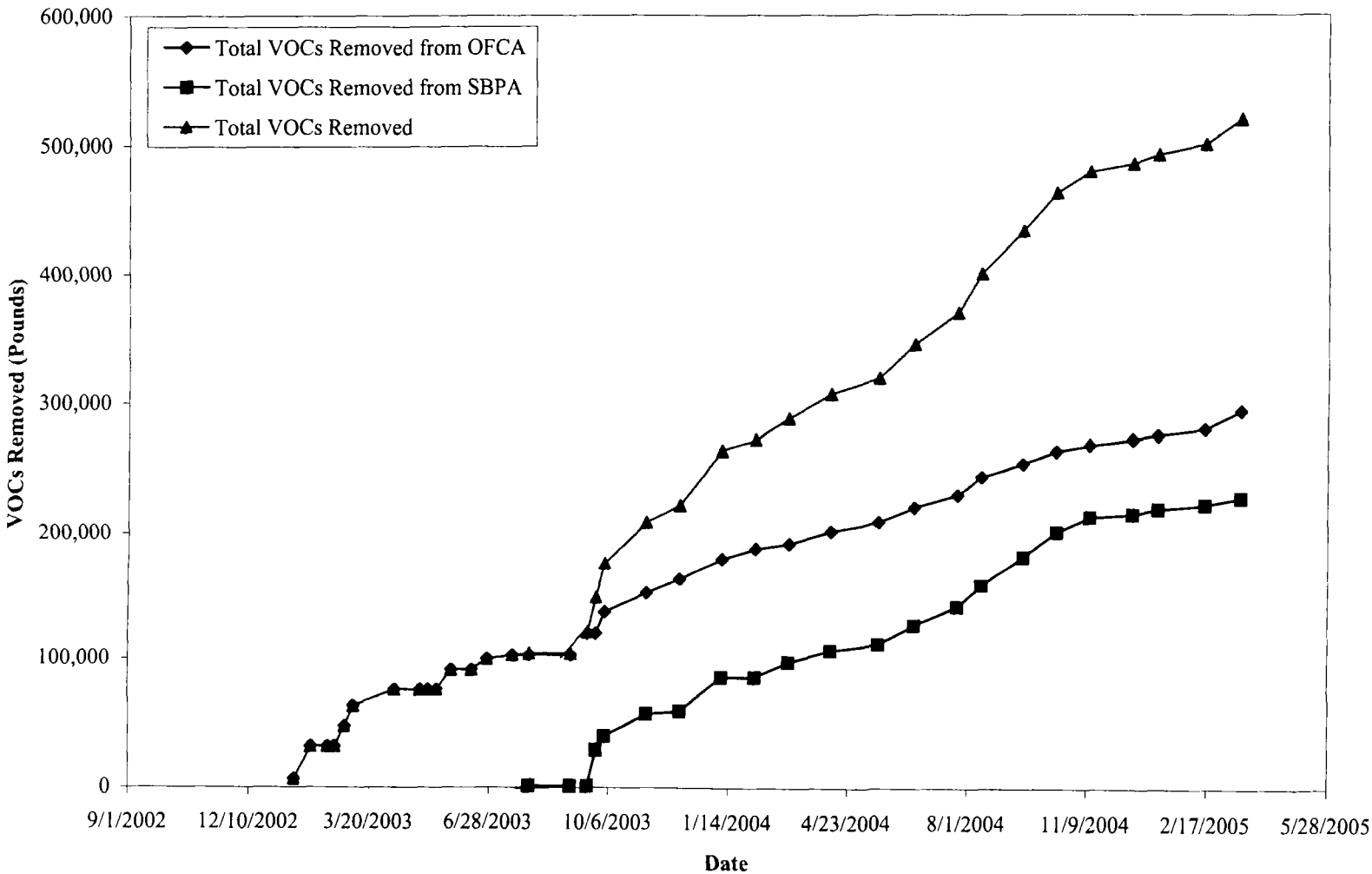
Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN



MBM/raa
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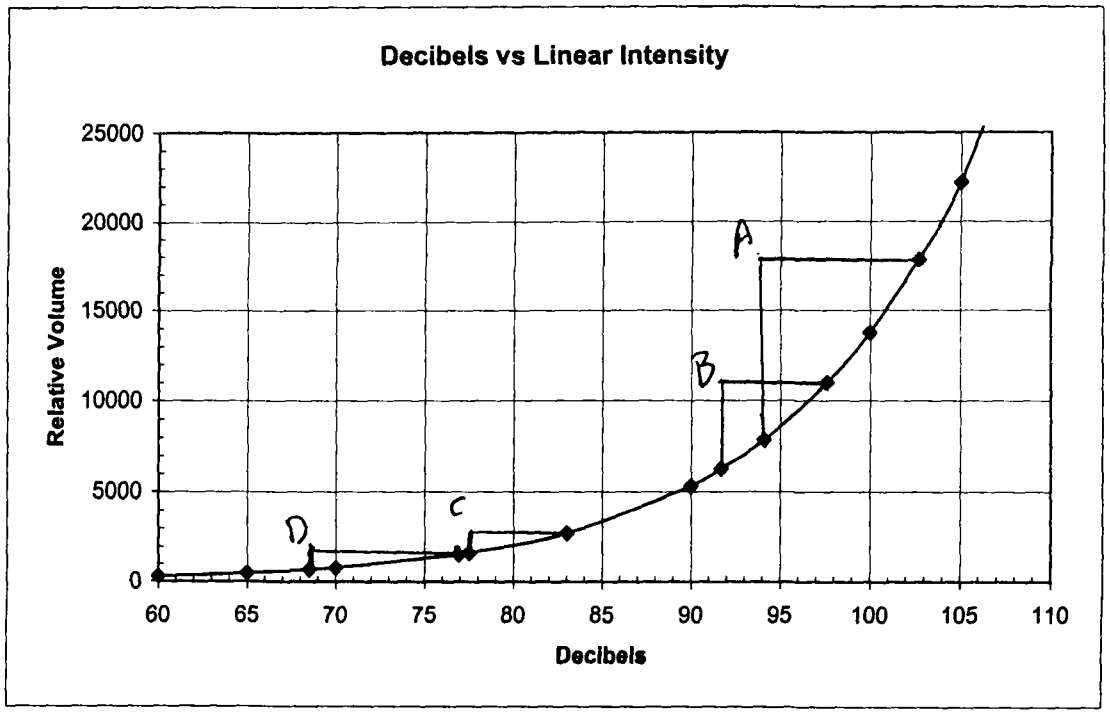
	Decibels	Volume Intensity
1.1	50	117
1.1	55	189
1.1	60	304
1.1	65	490
1.1	**68.5**	**685**
1.1	70	790
1.1	**76.9**	**1524**
1.1	**77.5**	**1614**
1.1	**83**	**2726**
1.1	90	5313
1.1	**91.7**	**6248**
1.1	**94.1**	**7853**
1.1	**97.6**	**10963**
1.1	100	13781
1.1	**102.7**	**17825**
1.1	105	22194
1.1	110	35743



	Decibel Reading Location	4/15/2005 open	5/5/2005 enclosed
A	Standing in front of the big blower that was running	102.7 dB	94.1 dB
B	Outside the back door	97.6 dB	91.7 dB
C	West of Therm-Ox two oxidizer outside the fence	83.0 dB	77.5 dB
D	Just east of the pond	76.9 dB	68.5 dB

5 April 05

1430 Arrive onsite Clear, Calm, Warm 75°F

Personnel Onsite

Lee Orosz	MWH
Charles Clayton	"
Mike Temple	Isotec
Tim Kirkland	Haystgen
Roger Rowson	Isotec
Gary Schreiber	"
Kenny Doane	PSA
Wes Trammell	"
Larry Campbell	BESPC

1440 Photo 73-~~22~~ 23 fme Looking NE at entrance road showing gravel removed from Shoulder

1447 Photo 73-~~23~~ 24 fme Looking NE at drum of product pumped from SBPA DPE wells, being transferred into GWTP

1500 Inspect Chemox injection opns. Charles stated have been completing 21 points/day (28 pts on Sunday). ~~Will~~ Have completed all points in yard and on E

Shoulder of Colfax Ave. Moved tanks to OFCA Sunday. Started injecting on W Shoulder of Colfax on Monday. Will complete 21 pts today. Will complete 6 pt tomorrow then break for 4 days. Will restart in roadway on Colfax next Monday.

1518 Photo 73-~~24~~ 25 fme Looking S at Isotec unit setup in OFCA.

1541 Photo 73-~~25~~ 26 fme Looking NE at Isotec adding powdered catalyst to water mixing tank

1543 Photo 73-~~26~~ 27 fme Looking NE at Isotec tech coiling hose at end of day's work

1550 Photo 72-~~10~~ 11 fme Looking NE at PSA pulling injection Rod.

1552 Photo 72-~~11~~ 12 fme Looking N at PSA backfilling injection pt hole w/ sand. Note traffic cones in Colfax Ave.

1600 Left Site Sunday

Larry Campbell

(154)

7 April 05

1000 Weekly Const. Mtg

Personnel Attending

At Site:

Lee Crosz – MWH

Kevin Adler – EPA

Phone:

Rob Adams – MWH

Aaron Potts – Environ

Larry Campbell – BoSA

MWH Chi. office / via phone

Chris Daly – MWH

Matt Mosarch – MWH

Chad Smith – MWH

H&S – No issues since last Mtg.

- IES performed Permitted Confined space entry (w/ permit) into bio tank Clarifier to remove sludge – NO incidents.
- MWH hosted Griffith fire dept. personnel on Mar. 22 to tour of Site & briefing re plant ops.
- MWH monitored ChemOx work in breathing zone but found no VOCs.
- Isotec & PSA working ~~in~~ along

JM Campbell

(155)

Collect w/ ChemOx injections w/o any problem.

GWTP – Plant operating under new procedure allowing adjustable flow rates - operating well at 35-36 gpm.

- Clarifier rake operating w/ NO problems. Conducted gear box parts wore out.
- Pumping water from all trench & well sources.

ISVE Systems – Both systems have been down for few days for regular maintenance

- ACS not reported odors in breakroom
- Have had problems w/ OFCA blowers having high exit temps & shutting down. System wont run w/ both OFCA blowers – OK w/ 1 blower but shuts down if both operate.

Noise Abatement – Flyteway Technologies has been authorized by MWH to build & install an enclosure around the largest blower at site.

- ACS is currently excavating inside ONCA near ~~the~~ ISVE elect and ~~water~~ from water pump

JM Campbell

MW#1 turned N elect in this area to avoid any potential problems.

Lower Aquifer Investigation

MW#1 nearly complete w/ report. Need PRP Group Review. Expect to send to agencies by ~~June~~ Apr 23. Anticipate continuing investigation in June, depending on water levels.

Semi Annual GW Sampling Event

- Was completed on 3/29. Expect results in one/two weeks.

Chem Ox

- Completed 9-day shift yesterday. Have completed 322 of 445 points w/ no problems. Expect completion 4/6-7).
Will start last 10-day shift on Monday Apr 11 @ 7:30 AM. Will have complete H&S mtg to include flaggers from Walsh & Kelly.

Look Ahead

- Chem Ox to start 4/11 in Calsag Ave.

JM Cumpiano

- Kevin suggested performing OF-CA cover inspection for erosion, etc. Lee mentioned that no problems observed during piezometer measurements.
- Carbon Change out in late April
- Global inspect / Thermox 2 in late April

H&S Look Ahead

- Working in Calsag Ave
- Warm weather - watch bees & wasps.
- Confined Space entry for thermox Control

Next mtg

For Chemox update - 4/14 @ 10AM
For Full ops - 5/5 @ 10AM

1035 mtg over

158

Monday, April 11, 2005

0730 Arrive onsite, partly cloudy 60°F
0745 Begin Construction Health & Safety Meeting
Personnel Onsite today:

Lee Orosz MWH	Mike Temple Isotec
Chad Smith MWH	David Powers MWH
Kenny Doane PSA	Tom Timics MWH
Aaran Sons PSA	Dean Gwis Wtk
Margaret Clark BVSPC	Norman Miller Wtk
Roger Reterson Isotec	
Gerry Schreiber Isotec	

Meeting was lead by Chad Smith. Began with an overview of this proj - injection of chemox second round, third shift will be injecting in Colfax road. Covered history of ACS site, discussed gen'l site rules and operating facility warning system. The schedule will be to work in road btw. hours of 8am & 3pm. Then will work along shoulder. Workers should arrive at 8am for H&S meeting. Reviewed H&S concerns: traffic, spill control (keep dilution water handy), will not need work tents now that temps are warmer; only workers needed in road should be there; Walsh & Kelly personnel will not need to wear hard hats. Everyone should wear safety vests.

Margaret M. Clark

159

Monday, April 11, 2005

0840 Photo 72-13 On OSCA facing east. Photo of Isotec mixing & pumping area.
0845 Plan is to work on west half of Colfax & west shoulder today. Plan to complete 10 points in west lane of Colfax.
0900 Photo 72-14 On Colfax at Reder facing North. Walsh & Kelly shut down west lane of traffic
Photo 72-15 On W/S Colfax just north of Reder. West Lane of Colfax closed. MWH begins marking out injection points
Photo 72-16 at 09:05 On West side of Colfax just north of Reder Rd. PSA begins drilling in road.
0915 PSA begins injections at first point of the day.
0940 Photo 72-17 facing north on Colfax at Reder. Pumping into three locations. PSA continues to drill points.
0955 On Colfax facing Offsite area photo 72-18 Photo of Isotec mixing and pumping area
1040 Photo 72-19 Drillers backfilling first injection point.
Photo 72-20 Next three injection points.

Margaret M. Clark

(160) Monday April 11, 2005

11:30 Photo 72-21 Facing west - Isotec Mixing area

Photo 72-22 - Facing NW - Photo of offsite containment area.

Photo 72-23 Facing South in offsite area - photo of drums staging area.

1200 Currently finishing pumping points 7, 8 & 9. PSA is drilling the next three. Expect to finish 12 points on the road today.

1200 Leave site for day.

Margaret M. Clark
April 11, 2005

Margaret M. Clark

14 April 05

0930 Arrive Onsite - clear
calm cool 50°F
Personnel Onsite
Lee Orosz Mutt
Dave Powers "
Victor Casares Walsh & Kelly
Norman Miller Jr "
Mike Temple ISOTEC
Gary Schreiber "
Roger Reierson "
Aaron Sensi PSA
Kenny Dennie "
Tom Thires Mutt
Chad Smith "
Larry Campbell BVSPC

0945 Photo 74-1 Looking N at ISOTEC operation showing flagger. Ops moved to East lane today

0947 Photo 74-2 Looking N showing 4 injection points in E lane of Colfax & PSA installing another point.

0948 Photo 74-3 Looking down at pre-drilled hole in asphalt roadway

Larry Campbell

0953 Photo 74-4 Looking N - of warning signs on Colfax Ave ≈ 1/4 mile S. of Rader Rd.

1000 Const. Coord Mtg. @ site trailer

Personnel at Mtg.

Pete Vogt, Lee Orosz & Chad Smith - Mcart ; Larry Campbell BUSIC

Vis Phone: Kevin Adler - EPA

Aaron Ritts - Environ

H&S No incidents since last week.. Had KO Safety mtg Monday 4/11 w/ ISOTEC, PSA & Walsh & Kelly personnel emphasing work in roadway. Personnel have done well wearing reflective vests hardhats & other PPE. W&K set up warning signs & traffic cones for work in roadway

Chemox Started on W. lane of Colfax on Monday @ 9AM - Stop work at 2:30 - 3:00 pm each day. Have completed 387 points thru 4/13. Expect total of 457 so 70 remaining, 35 in roadway, 35 in shoulder. Completing 14/day in road + some in shoulder after roadway work

JM Campbell

Last Peroxide shipment due today.

PSA Filling top 6" of impact. points holes w/ black Cement Grout

Look Ahead

Expect to Complete work in roadway by Saturday 4/16 pm

Complete all by Monday 4/18

Will clean up & demob on Wed.

Community Involvement -

- None to speak of.

Notified Jim Reyes of Griffith DPW that work started, but he doesn't inspect the operation

- Plan to install noise abatement shields around blower next wk.

H&S Look

- will ~~Contact Coordinate~~ hold another H&S lunch at end of Chemox work

GW/TP - All working OK

Next Mtg - Thurs 4/21 @ 2pm

1020 Mtg over

JM Campbell

21 April 2005

1355 Arrive Onsite - clear breezy cool

Personnel Onsite

Lee Orosz	MWH
Tim Kirkland	Austgen
Tom Tinics	MWH
Mike Chimeucki	Mierchem
* Pete Vogt	MWH
* Matt Mesarch	MWH
* Prabhakar Kasarabada	IDEM
* Kevin Adler	EPA
* Larry Campbell	BUSR

1400 Construction Meeting @ ACS Site Trailer

Personnel at mtg noted w/ * in above list.

H&S - No incidents since last Mtg. MWH Monitored VOCs in breathing zone of workers w/ PID - Did not Measure any elevated levels

Walsh + Kelly provide traffic control for work in roadway of Colfax Ave. No problems encountered

J M Campbell

Jim Rigney - Griffith Director of Public Works visited site during roadway closures + work in the Street in operations. Also approved black concrete patches of asphalt @ drillholes.

Chemox - ISOTEC + PSA

Environmental completed chemical injections on Sunday 17 April, ~~PSA chemical~~ [illegible] injecting 456 locations including yard at 802 Rider Rd, at shoulders + roadway of Colfax Avenue.

PSA demobilized on Sunday 4/17 + ISOTEC demobed on Monday 4/18. Isotec transferred Peroxide ~~on 4/14~~ [illegible] from tanker truck into 55 gal. drums + storing onsite near treatment plant. Also [illegible] Storing mixing tanks + dry chemicals onsite for [illegible] ~~from~~ [illegible] for use in next round of injections.

Look Ahead - MWH to prepare letter report of Chemox injection round (due late April).

Mwit expects next followup
Sampling to start May 16
Following receipt of these results
Mwit will propose 3rd Round
of Clemex in Mid-late July
(dependent on water levels)

Other Business

- How many rounds of injections? At least 3, may be 6, depending on results
- Need to establish a cleanup level for groundwater in order to assess cleanup activities. Suggestion was ≤ 500 ppb in GW.

Interaction w/ Public

- Griffith DPW was pleased w/ work in roadway & asphalt patching.
- Borings were finished earlier than planned, Mwit did not have HSB lunch for contractors.
- IDEM suggested collecting soil & GW samples outside impacted area as references for cleanup levels

Next Mtg — Friday May 6 @ 1030 AM at Mwit Chicago office

1430 Mtg over

JMC Dempsey

1440 All visitors left Clemex injection area to inspect condition of injection area

1510 All personnel returned to GWTP

1445 Photo 574-5 looking N at yard at 1002 Roder Rd

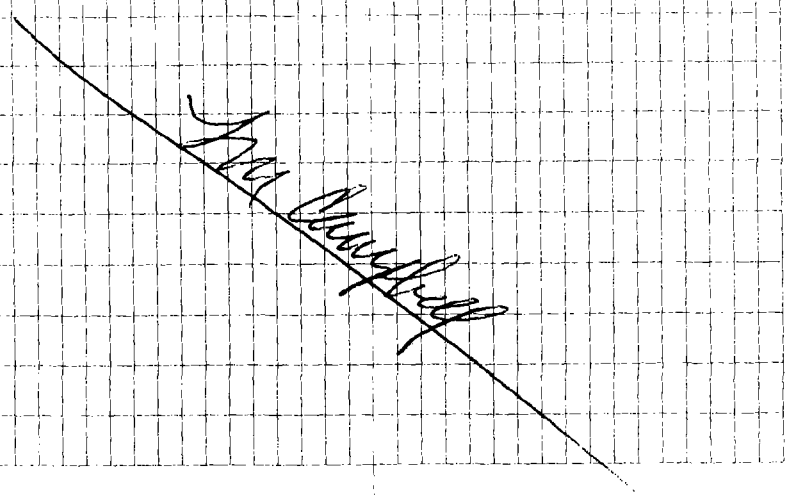
1447 Photo 74-7 looking N at E shoulder of ~~Roder~~ Calfax Ave

1450 Photo 74-8 looking S at N shoulder of Calfax.

1455 Photo 74-9 looking E at blade Concrete patch in Asphalt roadway.

→ 1510

1530 Left site for Day



28 April 05

0900 Arrive Onsite - Cool 50°F
Partly Cloudy, Calm
Personnel Onsite
Lee Grosz - Mwh
Tom Times - Mwh
Tim Kirkland - Austgen
Michael Grasse ~~Grasser~~ - Mwh H&S ~~QA~~ officer
LM Campbell - BVSPC

0910 Disc w/ Lee.
On 4/25/05 SBPH DPE 46 well had leaked 50-100 gal liquid onto cap, flowed into catch basin at edge of cap & then into 1st stormwater vault on HCS area. There was oil sheen on water in Vault 1, but not in Vault 2. Mwh removed DPE pump & temporarily stored in haz. waste rolloff area at GWTP. Mwh plugged discharge line & returned DPE well system to open. Mwh believes check valve of DPE46 stuck open allowing overflow.

LM Campbell

Mwh coordinated w/ HCS and pumped liquid from Vaults 1 & 2 directly into Mwh GWTP bio tank. Mwh use high pressure hose + limited amt (1 gal) Muriatic acid to wash down cap and sides of catch basin & vaults & pumped all water (est ≈ 300 gal) to biotank.
- Filtering protective noise insulating housing for main exterior blower was delivered & installed Wednesday April 27. Noise level has dropped significantly.
- Global Technologies Thermox 2 inspection was delayed to May 3.
0915 Photo 74-10 looking S at new enclosure on blower
0917 Photo 74-11 looking SE at new blower enclosure
0918 Photo 74-12 looking SW at showing interior noise insulation on blower enclosure
0940 Left site for Day

LM Campbell

6 May 05

1030 O&M Mtg @ MWH office in Chicago
Personnel Attending
Pete Vagt, Todd Lewis, Rob Adams, Chad Smith, Chris Daly, Amy Chlor, Jon Pohl - MWH
Kevin Adler - EPA
Larry Campbell - BUSPC
No one on via phone.

H&S - No H&S issues since last mtg on 4/28/05. MWH Corp. H&S Officer performed H&S Audit of ACS Opns on 4/28 - passed w 100% satisfaction.

GWTP Operating at demand flow of 25-40 gpm. Was down 5/4 during Thermox 2 inspection

ISVE Systems operating OK. Global Technologies onsite 5/3 & 4 to inspect thermox 2. Both systems Thermox 1 & 2 were shut down Global identified a problem w/ leakage of a few (5) tubes

Jm Campbell

in the heat exchanger. Global will report results w/ recommendations MWH inspected coating on interior of Thermox 1 - no apparent problems. Global reorientated spray nozzles in Scrubber of unit 2. MWH has been operating only one OFCA blower because Thermox 2 would exceed it's Temp. limit. After adjustment of spray nozzles, MWH will attempt to operate both OFCA ~~blowers~~ blowers.

- On 4/25, ACS notified MWH that SBPA well SVE-46 was overflowing & oily water flowing to ~~a tree~~ catchbasin & then on to Storm Water Vault #1. MWH shut off air to DPE wells, removed pump for inspection & capped discharge & turned off air supply. MWH pumped oily material to GWTP biotank, then washed down cap of ~~Storage~~ Tank Vaults MWH planning remedy to mitigate potential future problems.

Interaction w/ Community - On 4/26 Fliers were delivered and

Jm Campbell

Installed Sound-reducing ~~the~~ enclosure on blower ME 102 + measured noise levels at various locations. Noted substantial reduction of noise. Pete provided a table of graph summarizing measure sound level reductions.

Lower Aquifer Invest

Phase I report will be issued 5/13. Proposing to do work in mid June. Will need access for new wells thru wetland – checking up regulatory agencies. Plan to install 5 wells @ 50' intervals parallel to RR tracks + run pumping tests.

Soil Vapor @ 1002 Reader Rd

Plan to conduct indoor air sampling after May 19 when containers will be available – will make 24 hr collection in basement.

Post Chem Ox

Post application sampling in early June on 3rd round of

Jim Campbell

Chem Ox Injections in July

Look Ahead

SVE Monitoring next wk
Indoor air sampling
Chem Ox Sampling
Carbon Changeout – Next week

Look Ahead H&S

– Carbon Changeout may require Confined space entry
– Watch for bees + wasps

Next Mtg

MWH office 6/3/05 at 10 AM

1100 Mtg over
1100 Left MWH office for day

Jim Campbell

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 73 Photo #23
Date: 4-05-05 Time: 1440
Photographer: Larry Campbell
Description: Photo facing northeast showing gravel has been removed from shoulder of entrance road.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 73 Photo #24
Date: 4-05-05 Time: 1447
Photographer: Larry Campbell
Description: Photo facing northeast showing drum of product pumped from SBPA DPE wells. Product being transferred into GWTP oil tank T6.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 73 Photo #25
Date: 4-05-05 Time: 1518
Photographer: Larry Campbell
Description: Photo facing south showing ISOTEC tank setup in OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 73 Photo #26
Date: 4-05-05 Time: 1541
Photographer: Larry Campbell
Description: Photo facing northeast showing ISOTEC technician adding powdered catalyst to water mixing tank.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 73 Photo #27
Date: 4-05-05 Time: 1543
Photographer: Larry Campbell
Description: Photo facing northeast showing ISOTEC technician coiling hose at end of work day.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #11
Date: 4-05-05 Time: 1550
Photographer: Larry Campbell
Description: Photo facing northeast showing PSA pulling chemox injection rod.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #12
Date: 4-05-05 Time: 1552
Photographer: Larry Campbell
Description: Photo facing north showing PSA backfilling injection point hole with sand. Note traffic cones in Colfax Ave.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #13
Date: 4-11-05 Time: 0840
Photographer: Margaret Clark
Description: Photo facing east showing ISOTEC mixing and pumping area in OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #14
Date: 4-11-05 Time: 0900
Photographer: Margaret Clark
Description: Photo facing northeast showing traffic control cones in place with traffic diverted to east lane of Colfax Avenue.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #15
Date: 4-11-05 Time: 0901
Photographer: Margaret Clark
Description: Photo facing southeast showing MWH personnel marking locations of injection points on Colfax Avenue.

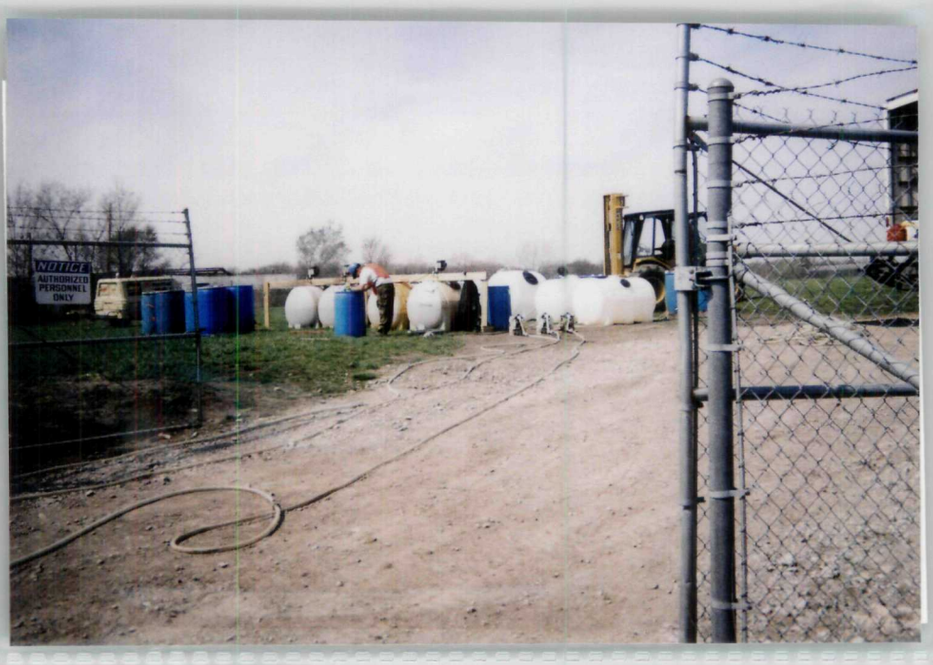
Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #16
Date: 4-11-05 Time: 0905
Photographer: Margaret Clark
Description: Photo facing east showing PSA beginning to drill through pavement on Colfax Avenue.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #17
Date: 4-11-05 Time: 0940
Photographer: Margaret Clark
Description: Photo facing north showing pumping into three rods simultaneously, with PSA continuing to install additional injection points on Colfax Avenue.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #18
Date: 4-11-05 Time: 0955
Photographer: Margaret Clark
Description: Photo looking west showing ISOTEC chemical mixing and pumping area in OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #19
Date: 4-11-05 Time: 1040
Photographer: Margaret Clark
Description: Photo facing southeast showing PSA backfilling first injection point hole following completion of injection.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #20
Date: 4-11-05 Time: 1041
Photographer: Margaret Clark
Description: Photo facing northeast showing ISOTEC injecting into another group of three injection rods on Colfax Avenue.



Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #21
Date: 4-11-05 Time: 1130
Photographer: Margaret Clark
Description: Photo facing southwest showing ISOTEC mixing and pumping area in OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #22
Date: 4-11-05 Time: 1131
Photographer: Margaret Clark
Description: Photo facing northwest showing OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 72 Photo #23
Date: 4-11-05 Time: 1132
Photographer: Margaret Clark
Description: Photo facing south showing ISOTEC drum storage area in OFCA.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #1
Date: 4-14-05 Time: 0945
Photographer: Larry Campbell
Description: Photo facing north showing chemical injection in east lane of Colfax Avenue. Note traffic control cones and flagger.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #2
Date: 4-14-05 Time: 0947
Photographer: Larry Campbell
Description: Photo facing north showing pumping into three injection points in east lane of Colfax Avenue. PSA is installing another injection point. Note traffic control cones.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #3
Date: 4-14-05 Time: 0948
Photographer: Larry Campbell
Description: Photo facing down showing pre-drilled hole in asphalt roadway of Colfax Avenue.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #4
Date: 4-14-05 Time: 0953
Photographer: Larry Campbell
Description: Photo facing north showing warning signs on Colfax Avenue ~1/4 mile south of Reder Road.

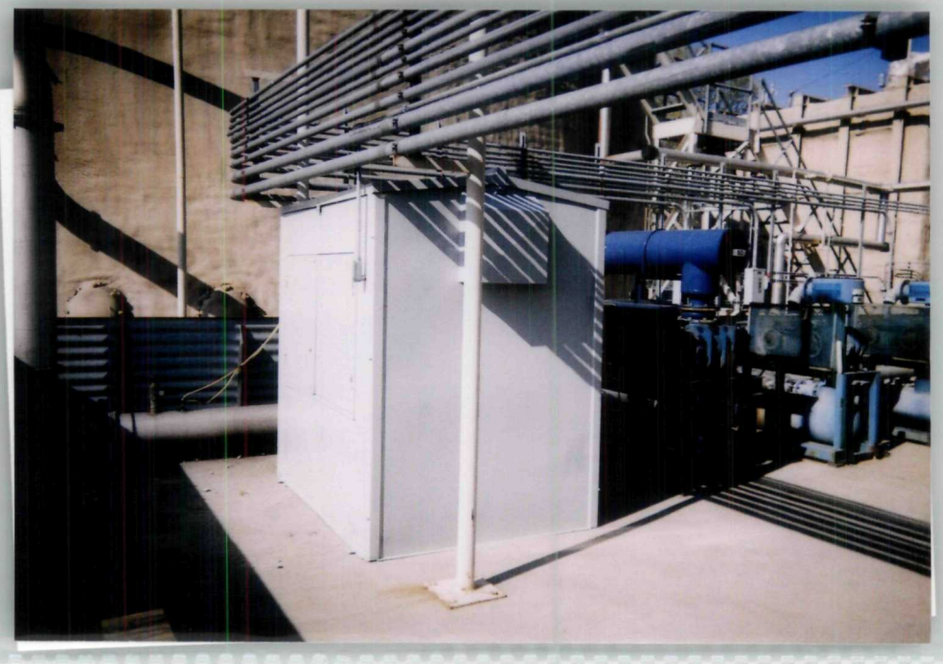
Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #5
Date: 4-21-05 Time: 1445
Photographer: Larry Campbell
Description: Photo facing north showing yard at 1002 Reder Road following completion of second round of chemical oxidation injections.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #6
Date: 4-21-05 Time: 1446
Photographer: Larry Campbell
Description: Photo facing northeast showing yard at 1002 Reder Road following completion of second round of chemical oxidation injections.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #7
Date: 4-21-05 Time: 1447
Photographer: Larry Campbell
Description: Photo facing north showing east shoulder of Colfax Avenue following completion of second round of chemical oxidation injections.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #8
Date: 4-21-05 Time: 1450
Photographer: Larry Campbell
Description: Photo facing south showing west shoulder of Colfax Avenue following completion of second round of chemical oxidation injections.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #9
Date: 4-21-05 Time: 1455
Photographer: Larry Campbell
Description: Photo facing down showing black concrete patchs in asphalt roadway on Colfax Avenue.



Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #10
Date: 4-28-05 Time: 0915
Photographer: Larry Campbell
Description: Photo facing south showing new noise abatement enclosure surrounding blower ME-102 at GWTP.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #11
Date: 4-28-05 Time: 0917
Photographer: Larry Campbell
Description: Photo facing southeast showing new noise abatement enclosure surrounding blower ME-102 at GWTP.

Site: American Chemical Service, Inc.
Proj. #: 46526
Roll: 74 Photo #12
Date: 4-28-05 Time: 0918
Photographer: Larry Campbell
Description: Photo facing southwest showing noise abatement insulation on interior of blower enclosure. Blower ME-102 is painted blue.